



Digitized by the Internet Archive in 2025 with funding from Boston Public Library

223

M3/B16 RA 86/57 BOSTON PUBLIC LIBRARY
GOVERNMENT DOCUMENTS DEPARTMENT
PROFIVED

JUN 2 2 1988

68800966

THE JOB OUTLOOK IN THE BOSTON AREA FOR SELECTED OCCUPATIONS 1985-1990

Jeffrey P. Brown

Boston Redevelopment Authority
Research Department

January 1986

Raymond L. Flynn, Mayor City of Boston

Stephen Coyle, Director Boston Redevelopment Authority

Alexander Ganz, Director Research Department

Boston Redevelopment Authority
Board of Directors
Robert L. Farrell, Chairman
Joseph J. Walsh, Vice-Chairman
James K. Flaherty, Treasurer
Clarence J. Jones, Asst. Treasurer
Michael J. Donlan, Member



## Table of Contents

|      |   | Page   |
|------|---|--|
| List | of Tables   | i  |
| I.   | Introduction  | 2  |
| II.  | Overview  | 5  |
| III. | Occupations That Will Lead Growth in the Boston Metro Area  | 10   |
| IV.  | Occupations That Will Lose Employment in the Boston Metro Area  | 14   |
| V.   | Wage Rates  | 16   |
| VI.  | Trends and Projections by Occupation Professional and Technical Occupations Managers, Officials and Proprietors Sales Workers Clerical Workers Craft and Related Workers Service Workers Laborers Except Farm | 22<br>22<br>23<br>24<br>24<br>25<br>27<br>28 |
| VII. | Appendix  | 29   |



## List of Tables

| Table A                | Number of Employees by Major Occupation, 1975-1990   | 6  |
|------------------------|--|----|
| Table B                | Average Annual Change in Number of Employees<br>by Major Occupation, 1975-1990                                     | 7  |
| Table C                | Average Annual Change in Employees by Major Occupation in Percent, 1975-1990                                       | 8  |
| Table D                | Change and Percent Change in Number of Employees by Major and Selected Detailed Industry, 1985-1990                | 9  |
| Table E                | Selected Occupations in Which Employment is<br>Likely to Increase by More than 2,000,<br>1985-1990                 | 11 |
| Table F                | Selected Occupations in Which Employment is<br>Likely to Increase by More than Four Percent<br>per Year, 1985-1990 | 12 |
| Table G                | Selected Occupations in Which Employment is<br>Likely to Decrease, 1985-1990                                       | 15 |
| Table H                | Mean Weekly Earnings for Selected Occupations,<br>August 1984.   | 17 |
| Table J                | Average Pay for Jobs Listed in the Boston<br>Area Job Bank, August 1985  | 19 |
| Table K                | Change and Percent Change in Annual Wage<br>Rates, 1985-1990, by Major and Selected<br>Detailed Industry           | 20 |
| Appendix               |  |    |
| Employment<br>1975-199 | t by Selected Occupations for Selected Years,  |    |
| Table 1                | Number of Employees  |    |

- Table 2 Average Annual Change in Number of Employees
- Table 3 Average Annual Percent Change in Number of Employees







## I. INTRODUCTION

The purpose of this report is to provide the Boston Public Schools and their Department of Education and Employment with an analysis of occupational trends in the Boston Area. This analysis is designed to assist the staff of that department by presenting trends and projections of employment for selected occupations that are relevant to the department's skill development and job training programs, and for wider issues concerning the employment of Boston high school graduates.

This report covers 235 occupations for selected years between 1975 and 1990. The occupations are related to current and potential programs at the Center. The data cover a five-county metropolitan area: Essex, Middlesex, Norfolk, Plymouth and Suffolk Counties. This geography better represents the local labor market and job market than Suffolk County alone.

The employment data cover full— and part—time jobs. It is important to distinguish between annual employment changes and job openings. Year—to—year changes in employment are net changes in jobs. Unfortunately, this hides the actual flows of workers into and out of jobs in a particular occupation. For a given year, the number of job openings would be much greater than the number of net additional jobs. Even for an occupation that has declining employment, job openings would occur for reasons such as workers changing occupations, retiring, having children, or going to school.

The sources of the data are (1) employment projections (by industry) by the Boston Redevelopment Authority, and (2) an econometric model developed by Regional Economic Models, Inc., which converts employment, by industry, into employment, by occupations. The products



of these two sources are projections of employment and wages and salaries for the Boston Metro Area by industry type and by 765 occupational categories. The Research Department has adapted the model to be consistent with the latest available employment data for Boston and the Boston labor market area. Data for the years through 1982 are actual; 1983 and 1984 are estimated; and 1985 and 1990 are projected.

The occupational classifications were developed by the U.S. Bureau of Labor Statistics. In spite of the detail in types of occupations, this system has a few shortcomings. In come cases, a worker may perform multiple tasks and have a variety of skills that suggest more than one occupational category. However, workers are counted in the category that fits best most of the time. Consequently, analysts should look at group of related occupations. Further, some job classifications become obsolete as technology changes. For example, the occupation "data entry operators" includes key punch operators who have been largely replaced by "computer operators" as computers have come to rely less on cards and more on programs on disks. Reclassifications are too infrequent to keep up with those types of changes.

Most of the occupational categories have familiar titles. However, it is worth noting the distinction between "technician" and "technologist." For example, a "medical laboratory technologist" would have more education or more skill or more work experience than a "medical laboratory technician" even if actual work tasks were similar in the two categories.

Finally, wage rates in this report are the product of wage and salary disbursements for an industry divided by employment in that industry. This means that (1) because part-time employment is included,



the wage rate for a given industry would tend to underestimate the full-time wage rate; and (2) the wages in this report do not represent entry-level wages. For a few selected occupations, hourly or weekly earnings data are available from a survey by the Bureau of Labor Statistics. Both sources are used in this report.

This report is part of a broader analysis of occupations in the Boston area. Forthcoming Research Department reports will cover occupations in office-related industries, construction jobs, and comparative wage rates in Boston, the Boston Metro Area and Massachusetts.





## II. OVERVIEW

The economy of the Boston Metropolitan Area (5 counties) will likely expand by nearly 52,000 jobs per year from 1985 to 1990, or 259,000 over the five-year period. That annual 2.6 percent growth will occur in a wide variety of occupations with an emphasis on professional, managerial, sales, clerical and service occupations. Employment for the major occupational categories for selected years are presented in Table A. The annual average change and percent change in employment are shown in Tables B and C.

Note that the average annual change (Table B) was much greater in 1984 and 1985 than in previous years. The strength of the local economy in 1984 resulted in higher than normal growth among all major occupational groups. Growth from 1985 to 1990 will find a more normal level, but will be still higher than the growth levels between 1975 and 1983.

The industries in the Metro Area with the most employment growth from 1985 to 1990 will be Finance and Insurance, Business Services, Educational Services, Medical Services and Other Professional Services (See Table D). However, the number of jobs will increase in many industries, including Electrical and Electronic Equipment Manufacturing, Instruments Manufacturing, Transportation and Communication, Hotels, and Eating and Drinking Places.

Employment trends and projections for all of the selected occupations are presented in the appendix in Tables 1-3.



TABLE A

NUMBER OF EMPLOYEES BY MAJOR OCCUPATION
BOSTON METRO AREA\* 1975-1990

| OCCUPATION              | 1975      | 1978      | 1983      | 1984      | 1985      | 1990      |
|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| TOTALALL OCCUPATIONS    | 1,599,540 | 1,731,116 | 1,894,319 | 1,960,134 | 2,018,086 | 2,276,745 |
| PROFESSIONAL/TECHNICAL  | 282,020   | 312,799   | 353,540   | 366,857   | 379,098   | 448,284   |
| MANAGERS/OFFICIALS      | 131,276   | 143,281   | 164,108   | 170,237   | 176,415   | 203,783   |
| SALES WORKERS           | 105,747   | 109,772   | 120,385   | 124,391   | 127,964   | 140,633   |
| CLERICAL WORKERS        | 344,568   | 368,163   | 409,596   | 422,594   | 434,153   | 483,483   |
| CRAFT & RELATED WORKERS | 162,316   | 170,595   | 180,800   | 191,477   | 197,539   | 221,404   |
| OPERATIVES              | 214,597   | 234,653   | 233,684   | 245,255   | 252,356   | 273,342   |
| SERVICE WORKERS         | 264,324   | 293,189   | 330,492   | 333,988   | 342,735   | 388,075   |
| LABORERS EXCEPT FARM    | 88,463    | 92,152    | 95,072    | 98,840    | 101,424   | 111,506   |
| FARMERS/FARM WORKERS    | 6,228     | 6,511     | 6,641     | 6,493     | 6,402     | 6,234     |

<sup>\*</sup> ESSEX, MIDDLESEX, NORFOLK, PLYMOUTH AND SUFFOLK COUNTIES.

SOURCE: BOSTON REDEVELOPMENT AUTHORITY RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC. OCTOBER 2, 1985.

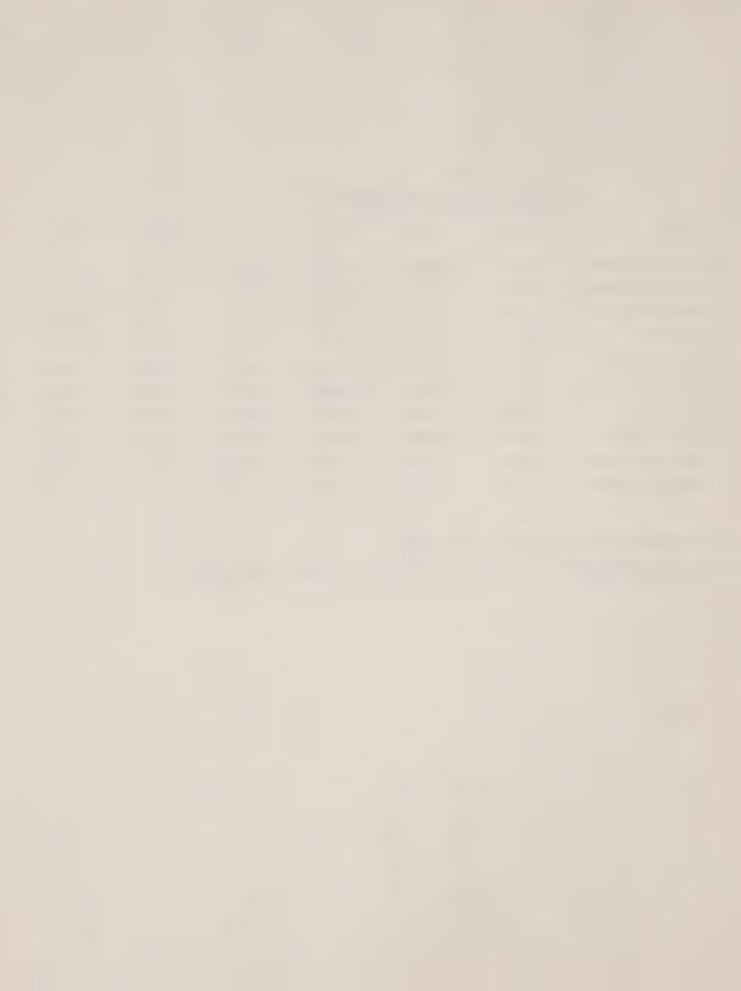


TABLE B

AVERAGE ANNUAL CHANGE IN NUMBER OF EMPLOYEES BY MAJOR OCCUPATION
BOSTON METRO AREA\* 1975-1990

| OCCUPATION              | 1975-78 | 1978-83 | 1983-84 | 1984-85 | 1985-90 |
|-------------------------|---------|---------|---------|---------|---------|
| TOTALALL OCCUPATIONS    | 43,859  | 32,641  | 65,815  | 57,952  | 51,732  |
| PROFESSIONAL/TECHNICAL  | 10,260  | 8,148   | 13,317  | 12,241  | 13,837  |
| MANAGERS/OFFICIALS      | 4,002   | 4,165   | 6,129   | 6,178   | 5,474   |
| SALES WORKERS           | 1,342   | 2,123   | 4,006   | 3,573   | 2,534   |
| CLERICAL HORKERS        | 7,865   | 8,287   | 12,998  | 11,559  | 9,866   |
| CRAFT & RELATED HORKERS | 2,760   | 2,041   | 10,677  | 6,062   | 4,773   |
| OPERATIVES              | 6,685   | - 194   | 11,571  | 7,101   | 4,197   |
| SERVICE WORKERS         | 9,622   | 7,461   | 3,496   | 8,747   | 9,068   |
| LABORERS EXCEPT FARM    | 1,230   | 584     | 3,768   | 2,584   | 2,016   |
| FARMERS/FARM WORKERS    | 94      | 26      | - 148   | - 91    | - 34    |

<sup>\*</sup> ESSEX, MIDDLESEX, NORFOLK, PLYMOUTH AND SUFFOLK COUNTIES.

SOURCE: BOSTON REDEVELOPMENT AUTHORITY RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC. OCTOBER 2, 1985.



TABLE C

AVERAGE ANNUAL CHANGE IN NUMBER OF EMPLOYEES BY MAJOR OCCUPATION
IN PERCENT
BOSTON METRO AREA\* 1975-1990

| OCCUPATION              | 1975-78 | 1978-83 | 1983-84 | 1984-85 | 1985-90 |
|-------------------------|---------|---------|---------|---------|---------|
| TOTALALL OCCUPATIONS    | 2.7     | 1.9     | 3.5     | 3.0     | 2.6     |
| PROFESSIONAL/TECHNICAL  | 3.6     | 2.6     | 3.8     | 3.3     | 3.7     |
| MANAGERS/OFFICIALS      | 3.0     | 2.9     | 3.7     | 3.6     | 3.1     |
| SALES WORKERS           | 1.3     | 1.9     | 3.3     | 2.9     | 2.0     |
| CLERICAL WORKERS        | 2.3     | 2.3     | 3.2     | 2.7     | 2.3     |
| CRAFT & RELATED WORKERS | 1.7     | 1.2     | 5.9     | 3.2     | 2.4     |
| OPERATIVES              | 3.1     | - 0.1   | 5.0     | 2.9     | 1.7     |
| SERVICE WORKERS         | 3.6     | 2.5     | 1.1     | 2.6     | 2.6     |
| LABORERS EXCEPT FARM    | 1.4     | 0.6     | 4.0     | 2.6     | 2.0     |
| FARMERS/FARM HORKERS    | 1.5     | 0.4     | - 2.2   | - 1.4   | - 0.5   |

<sup>\*</sup> ESSEX, MIDDLESEX, NORFOLK, PLYMOUTH AND SUFFOLK COUNTIES.

SOURCE: BOSTON REDEVELOPMENT AUTHORITY RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC. OCTOBER 2, 1985.



TABLE D

CHANGE AND PERCENT CHANGE IN NUMBER OF EMPLOYEES 1985-1990
BY MAJOR AND SELECTED DETAILED INDUSTRY IN THE BOSTON METRO AREA

|                                 | NUMBER OF | EMPLOYEES | CHANGE IN EMPL | OYMENT 1985-90 |
|---------------------------------|-----------|-----------|----------------|----------------|
| INDUSTRY                        | 1985      | 1990      | NUMBER         |                |
|                                 |           |           |                |                |
|                                 |           |           |                |                |
| TOTAL WAGE & SALARY EMPLOYMENT  | 2,048,034 | 2,307,995 | 259,961        | 12.7           |
| CONSTRUCTION                    | 61,842    | . 72,187  | 10,345         | 16.7           |
| MANUFACTURING                   | 439,086   | 486,597   | 47,511         | 10.8           |
| FABRICATED METAL PRODUCTS       | 28,577    | 32,634    | 4,057          | 14.2           |
| NON-ELECTRICAL MACHINERY        | 68,852    | 81,801    | 12,949         | 18.8           |
| ELECTRICAL & ELECTRONIC EQUIP.  | 105,580   | 114,847   |                | 8.8            |
| TRANSPORTATION EQUIP.           | 34,226    | 39,387    | 5,161          | 15.1           |
| INSTRUMENTS                     | 52,821    | 66,113    | 13,292         | 25.2           |
| FOOD PROCESSING                 | 16,922    | 15,774    |                |                |
| TEXTILES                        | 7,892     | 7,189     |                | - 8.9          |
| APPAREL                         | 16,391    | 15,915    | - 476          |                |
| PAPER                           | 12,245    | 11,869    |                | - 3.1          |
| PRINTING & PUBLISHING           | 32,407    | 33,164    |                | 2.3            |
| CHEMICALS                       | 10,886    | 10,884    | - 2            |                |
| RUBBER                          | 15,618    | 18,904    | 3,286          | 21.0           |
| TRANSPORTATION/PUBLIC UTILITIES | 93,018    | 99,607    | 6,589          | 7.1            |
| TRUCKING                        | 18,367    | 19,963    | 1,596          | 8.7            |
| LOCAL/INTERURBAN TRANSIT        | 8,948     | 9,610     | 662            | 7.4            |
| AIR TRANSPORTATION              | 10,212    | 11,299    |                |                |
| COMMUNICATION                   | 31,532    |           | 1,931          | 6.1            |
| PUBLIC UTILITIES                | 11,743    | 33,463    |                |                |
| WHOLESALE TRADE                 |           | 12,017    |                | 2.3            |
| RETAIL TRADE                    | 106,615   |           |                | 0.5<br>10.5    |
|                                 | 329,333   | 363,779   |                |                |
| EATING & DRINKING PLACES        | 105,423   |           | ·              | 8.4            |
| FINANCE/INSURANCE/REAL ESTATE   | 141,305   | 156,713   |                | 10.9           |
| BANKING                         | 43,724    | 46,823    |                |                |
| INSURANCE                       | 55,435    | 61,551    |                |                |
| CREDIT & FINANCE REAL ESTATE    | 18,062    | 21,821    | 3,759          |                |
|                                 | 24,083    | 26,518    |                | 10.1           |
| SERVICES                        | 578,495   | 711,333   |                |                |
| HOTELS                          | 28,603    | 34,193    |                | 19.5           |
| PERSONAL SERVICE & REPAIR       | 25,770    | 28,198    |                | 9.4            |
| PRIVATE HOUSEHOLD               | 16,215    | 16,145    | - 70           |                |
| AUTO REPAIR/SERVICE             | 11,186    | 12,654    | 1,468          | 13.1           |
| BUSINESS SERVICES               | 96,463    | 120,375   |                | 24.8           |
| AMUSEMENT & RECREATION          | 12,388    | 14,545    | 2,157          | 17.4           |
| MEDICAL SERVICES                | 162,799   | 191,176   | 28,377         | 17.4           |
| MISC. PROFESSIONAL SERVICES     | 52,377    | 64,210    | 11,833         | 22.6           |
| EDUCATIONAL SERVICES            | 123,711   | 171,828   |                | 38.9           |
| NON-PROFIT ORGANIZATIONS        | 46,677    | 55,344    | 8,667          | 18.6           |
| GOVERNMENT                      | 288,015   | 300,275   |                | 4.3            |
| STATE & LOCAL                   | 199,087   | 207,365   | 8,278          | 4.2            |
| FEDERAL CIVILIAN                | 58,980    | 61,661    | 2,681          | 4.5            |
|                                 |           |           |                |                |

SOURCE: BOSTON REDEVELOPMENT AUTHORITY, RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC. OCTOBER 2, 1985





## III. OCCUPATIONS THAT WILL LEAD GROWTH IN THE BOSTON METRO AREA

Twenty-three of the 235 selected occupations will grow by more than 2,000 jobs from 1985 to 1990, or by over 400 jobs per year (see Table E). This diverse group is led by office-related occupations (building custodians, secretaries, general office clerks and cashiers), medical workers (physicians, dentists, etc.), assemblers, construction craft workers and sales clerks, each of which will grow by over 1,000 jobs per year. Food-related occupations--chefs and cooks, waiters and waitresses and kitchen helpers--rank high with annual job growth in the 600-700 range. Electric and electronic technicians, office machine operators and machine tool operators round out the occupations that will expand by more than 500 jobs per year through 1990.

Interestingly, computer programmers rank 18th and computer systems analysts rank 23rd, behind occupations such as automotive mechanics, sales workers and typists.

Together, these 23 occupations will account for more than 18,000 jobs per year or 36 percent of the employment growth for all occupations 1985-1990. The other 64 percent of employment growth will be spread among the hundreds of other occupational categories.

Regarding rate of growth, legal assistants will lead all other selected occupations with a 7.0 percent average annual increase in employment, 1985-1990 (see Table F). Although their absolute numbers are not the highest, computer service technicians, computer systems analysts and computer programmers rank 2nd, 6th, and 7th, respectively, in rate of growth. Vocational education teachers, tool programmers (numerical control), lawyers, child care attendants, physical therapy assistants, institutional cooks, electric and electronic technicians and



Table E

SELECTED OCCUPATIONS IN WHICH EMPLOYMENT IS LIKELY TO INCREASE BY MORE THAN 2,000 IN THE BOSTON METRO AREA, 1985-1990, IN DESCENDING ORDER

|   | 1985-1990<br>Change in Employment | Average<br>Annual Change |
|---|-----------------------------------|--------------------------|
| <ol> <li>Building custodians</li> <li>Medical workers except<br/>technicians</li> </ol> | 9,257<br>8,608                    | 1,851<br>1,722           |
| 3. Secretaries  | . 7,773                           | 1,555                    |
| 4. General clerks, office   | 6,618                             | 1,324                    |
| 5. Assembler occupations  | 5,791                             | 1,158                    |
| 6. Cashiers   | 5,636                             | 1,127                    |
| 7. Construction craft workers   | 5,218                             | 1,044                    |
| 8. Sales clerks   | 5,210                             | 1,042                    |
| 9. Chefs & cooks  | 3,695                             | 739                      |
| 10. Waiters & waitresses  | 3,529                             | 706                      |
| 11. Kitchen helpers   | 2,839                             | 568                      |
| 12. Electric & electronic   | 2,696                             | 539                      |
| technicians   |                                   |                          |
| 13. Office machine operators  | 2,676                             | 535                      |
| 14. Machine tool operators  | 2,563                             | 513                      |
| 15. Automotive mechanics  | 2,355                             | 471                      |
| 16. All other sales workers   | 2,337                             | 467                      |
| 17. Typists   | 2,332                             | 466                      |
| 18. Health technicians & technologists  | 2,294                             | 459                      |
| 19. Computer programmers  | 2,290                             | 458                      |
| 20. Store managers  | 2,224                             | 445                      |
| 21. Metalworking crafts   | 2,082                             | 416                      |
| 22. Bus drivers   | 2,062                             | 412                      |
| 23. Computer systems analysts   | 2,028                             | 406                      |
| Subtotal  | 92,113                            | 18,423                   |
| Total Change, All Occupations   | 258,659                           | 51,732                   |
| Selected Occupations, Percent of Total Change   | f 35.6                            | 35.6                     |

Source: BRA Research Department; Regional Economic Models, Inc.

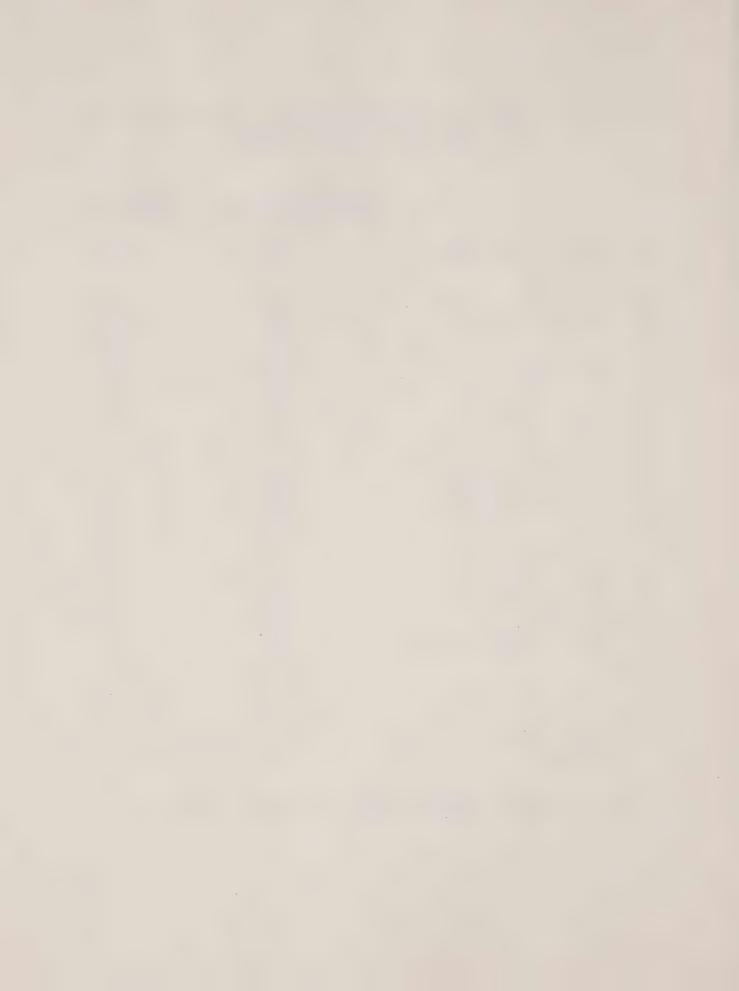


Table F

OCCUPATIONS IN WHICH EMPLOYMENT IS LIKELY TO INCREASE BY

MORE THAN 4 PERCENT PER YEAR IN THE

BOSTON METRO AREA, 1985-1990

|     |                                     | Average Annual Percent<br>Change 1985-1990 | Average<br>Number |
|-----|-------------------------------------|--|-------------------|
| 1.  | Legal assistants                    | 7.0  | 101               |
| 2.  | Computer service technicians        | 6.3  | 94                |
| 3.  | Vocational education teachers       | 5.9  | 145               |
| 4.  | Tool programmers, numerical control | 5.9  | 21                |
| 5.  | Computer systems analysts           | 5.6  | 406               |
| 6.  | Computer operators                  | 5.6  | 330               |
| 7.  | Computer programmers                | 5.1  | 458               |
| 8.  | Lawyers                             | 4.7  | 335               |
| 9.  | Child care workers                  | 4.5  | 159               |
| 10. | Physical therapy assistants         | 4.3  | 33                |
| 11. | Cooks, institutional                | 4.0  | 392               |
| 12. | Electric & electronic technicia     | ans 4.0                                    | 539               |
| 13. | Insurance clerks, medical           | 4.0  | 73                |
| Sub | total                               | -  | 3,086             |
| Tot | al, Occupations                     | 2.4  | 51,732            |
| Sub | total, Percent of Total             | -  | 6.0               |

Source: BRA Research Department; Regional Economic Models, Inc.



medical insurance clerks fill out the list of those occupations that will grow 4.0 percent or more per year. In comparison, the average annual growth for all occupations will be 2.4 percent. These 13 occupations will account for 2,756 jobs per year, or 5.3 percent of the annual growth in all occupations (see Table F).



IV. OCCUPATIONS THAT WILL LOSE EMPLOYMENT IN THE BOSTON METRO AREA

Twelve of the selected occupations show a net loss of jobs from 1985 to 1990 (see Table G). Sewers and stitchers, mail carriers and postal clerks, central office operators and data entry operators each will lose 30 or more jobs per year. However, the losses in these 12 selected occupations (378 per year) would be more than offset by gains in, for example, bus drivers alone (412 per year).

Notably, 8 of the 12 occupations are related to either printing (typesetters and compositors, bindery operatives, letter press operators and photoengravers) or communications (mail carriers and postal clerks, central office operators, communication equipment repairers and directory assistance operators). While the communications and printing industries are expanding in the Boston Metro Area, new technologies are decreasing the jobs available for certain occupations within those industries.



Table G

SELECTED OCCUPATIONS IN WHICH EMPLOYMENT IS LIKELY TO DECREASE IN THE BOSTON METRO AREA, 1985-1990

|     |                                    | 1985-1990<br>Change in<br>Employment | Annual<br>Average<br>Change |
|-----|------------------------------------|--------------------------------------|-----------------------------|
| 1.  | Sewers and stitchers               | - 582                                | - 116                       |
| 2.  | Mail carriers and postal clerks    | <b>-</b> 373                         | <b>-</b> 75                 |
| 3.  | Central office telephone operators | <b>-</b> 322                         | - 64                        |
| 4.  | Data entry operators               | - 149                                | - 30                        |
| 5.  | Communication equipment repairers  | - 118                                | - 24                        |
| 6.  | Typesetters & compositors          | - 115                                | - 23                        |
| 7.  | Butchers & meatcutters             | - 86                                 | - 17                        |
| 8.  | Bindery operatives                 | <b>-</b> 79                          | - 16                        |
| 9.  | Letter press operators             | - 26                                 | <b>-</b> 5                  |
| 10. | Photoengravers                     | <del>-</del> 20                      | - 4                         |
| 11. | Directory assistance operators     | - 16                                 | <b>-</b> 3                  |
| 12. | Lathers                            | <b>-</b> 5                           | - 1                         |
| Sub | total                              | - 1,891                              | - 378                       |

Source: BRA Research Department; Regional Economic Models, Inc.



#### V. WAGE RATES

Wage rates are available for a limited number of occupations. The Bureau of Labor Statistics (U.S. Department of Commerce) conducted a wage survey in the Boston area in August 1984. The results (see Table H) show a wide range in mean weekly earnings. The highest paid occupations in the survey sample were computer systems analysts (\$589.00 per week), toolmakers and diemakers (\$511.60), auto mechanics (\$500.40), fitters and pipe liners (\$493.60), stationary engineers (\$484.00) and electricians (\$482.80). The lowest earnings were found among clerical workers and service workers: messengers (\$198.00), file clerks (\$205.00), guards (\$212.00), building custodians (\$232.80) and switchboard operators (\$242.00). In the middle range were various occupations in the professional, craft, operative, clerical, and laborer categories.

Another source of wage rates is the Massachusetts Division of Employment Security (DES). Average weekly pay for 13 major occupational categories listed in the Boston Area Job Bank provides an interesting comparison (see Table J). However, the DES cautions readers that the data represent only employers and job seekers who use the Employment Service local offices to fill jobs openings or seek work. The wage rates are an average of pay for jobs filled, usually entry-level positions. Consequently, the average weekly pay in the DES file is lower than the BLS averages.

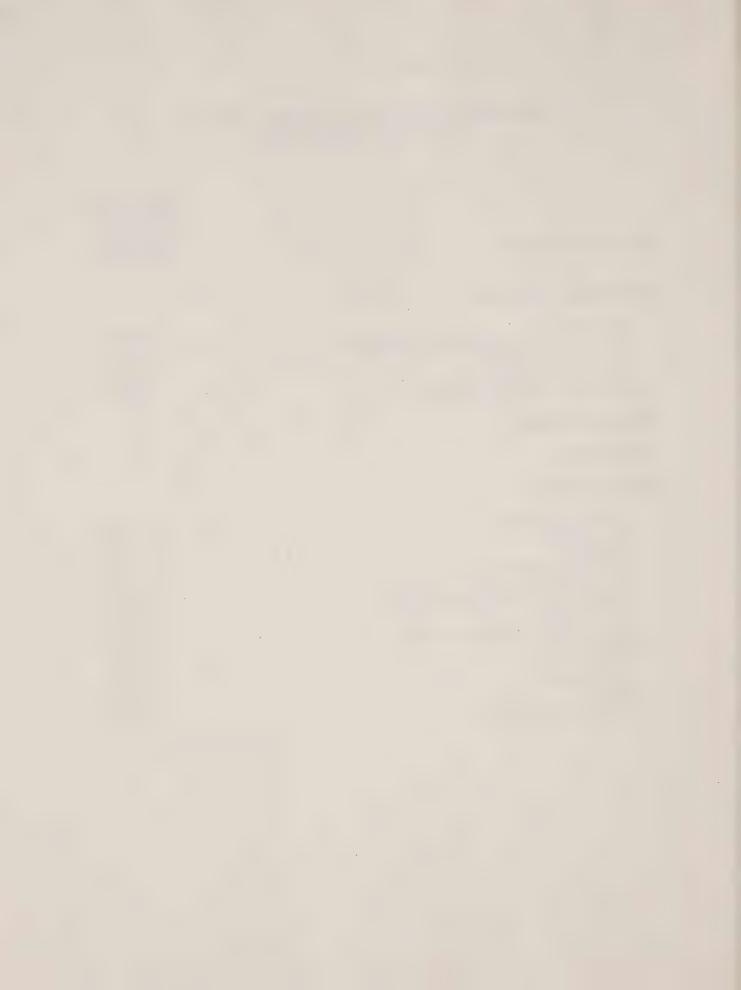
The most complete and consistent set of wage rates are available by industry. The projected annual wage rates for 1985 and 1990 (see Table K) show a wide range of rates, but fairly even growth in rates among industries. The highest average annual wage rates in 1985 in civilian



Table H

# MEAN WEEKLY EARNINGS FOR SELECTED OCCUPATIONS BOSTON AREA, AUGUST 1984

| SELECTED OCCUPATIONS  | AUGUST 1984 MEAN WEEKLY EARNINGS (DOLLARS)   |
|---|--|
| Professional, Technical   |  |
| Drafters Electrical and Electronic Technicians Nurses, Registered Computer Programmers Computer Systems Analysts  | \$418.00<br>464.50<br>436.50<br>449.50<br>589.00   |
| Manager, Officials  |  |
| Sales Workers   |  |
| Clerical Workers  |  |
| Accounting Clerks File Clerks Messengers Computer Operators Data Entry Operators Peripheral EDP Equipment Operators Order Clerks Payroll and Timekeeping Clerks Receptionists Secretaries Stenographers Typists Switchboard Operators | 263.00<br>205.00<br>198.00<br>316.50<br>261.50<br>245.50<br>254.50<br>291.00<br>256.00<br>344.00<br>329.00<br>237.00<br>242.00 |



# MEAN WEEKLY EARNINGS FOR SELECTED OCCUPATIONS, continued

| SELECTED OCCUPATIONS   | AUGUST 1984<br>MEAN WEEKLY<br>EARNINGS<br>(DOLLARS) |
|--|---|
| THE COUNTY OF TH | (DODAMIC)_  |
|  |   |
| Craft and Related Workers*   |   |
| Carpenters   | \$446.00  |
| Electricians   | 482.80  |
| Fitters, Pipelayers  | 493.60  |
| Painters, construction   | 404.40  |
| Auto Mechanics   | 500.40  |
| Maintenance Repairers  | 441.20  |
| Machinists   | 453.20  |
| Toolmakers and Diemakers   | 511.60  |
| Stationary Engineers   | 484.00  |
| Operatives*  |   |
| Machine Tool Operators   | 441.60  |
| Packing and Inspecting Operators   | 286.00  |
| Truck Drivers  | 421.20  |
|  |   |
| Service Workers*   |   |
| Building Custodians  | 232.80  |
| Guards   | 212.80  |
|  |   |
| Laborers*  |   |
| Helpers, Trades  | 320.40  |
| Order Fillers  | 337.20  |
| Stock Clerks   | 298.00  |

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Boston Area Wage Survey, August 1984.

<sup>\*</sup> Assuming a 40-hour week (data were hourly wages).



Table J

AVERAGE WEEKLY\* WAGES FOR JOB OPENINGS FILLED BY MAJOR OCCUPATIONS,
BOSTON METRO AREA,
January 1 to August 31, 1985

| Occupation  | Number of<br>Jobs Filled                                      | Average<br>Weekly Wage   |
|---|---|--|
| All Occupations   | 5,267   | 183.20   |
| Professional, Technical, Managerial   | 255   | 358.80   |
| Clerical Sales Domestic Services Other Services Farming, Fishing, Forestry Data Processing Machine Trades Bench Work Structural | 1,435<br>420<br>169<br>1,133<br>276<br>93<br>80<br>138<br>227 | 167.60<br>149.60<br>156.40<br>160.80<br>150.80<br>216.00<br>224.40<br>215.60 |
| Motor Freight, Transportation<br>Packaging, Material Handling<br>Other  | 123<br>891<br>27  | 222.00<br>179.60<br>208.40   |

<sup>\*</sup> Assuming a 40-hour week.

Source: Massachusetts Division of Employment Security.

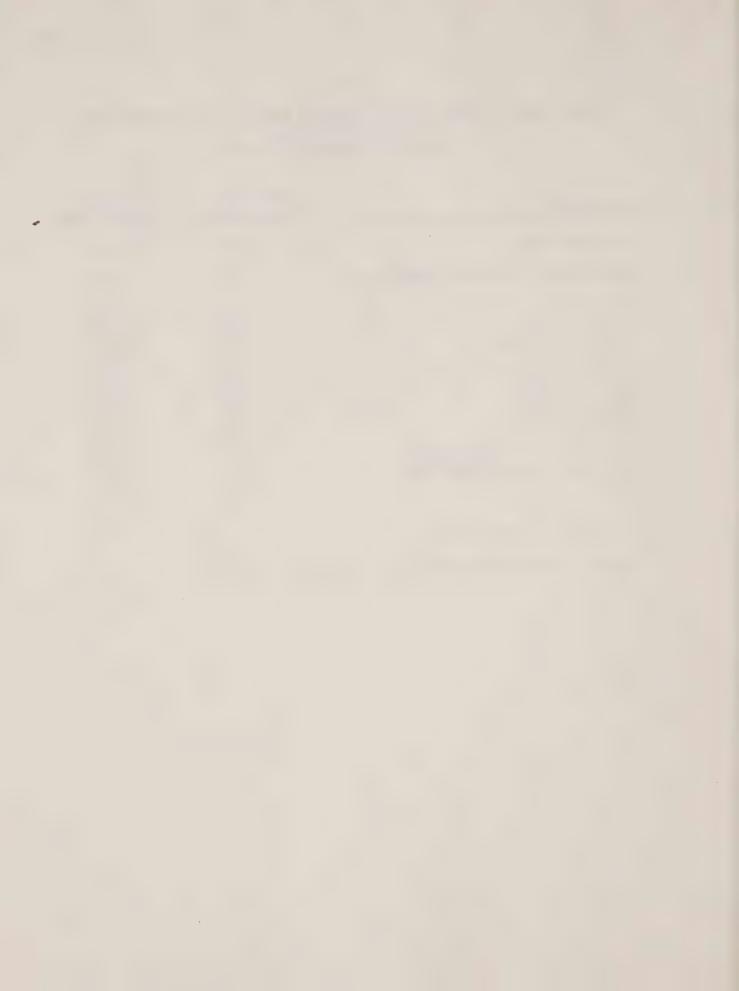


TABLE K

CHANGE AND PERCENT CHANGE IN ANNUAL WAGE RATES 1985-1990
BY MAJOR AND SELECTED DETAILED INDUSTRY IN THE BOSTON METRO AREA

| INDUSTRY                                | AVERAGE ANNUAL | WAGE RATE | CHANGE IN WAGE | RATE 1985-90<br>PERCENT |
|---|----------------|-----------|----------------|-------------------------|
|   | 1703           |           |                |                         |
|   |                |           |                |                         |
| TOTAL WAGE & SALARY EMPLOYMENT          | 20,458         | 28,115    | 7,657          | 37.4                    |
| CONSTRUCTION                            | 25,868         | 35,739    | 9,871          | 38.2                    |
| MANUFACTURING                           |                |           |                |                         |
| FABRICATED METAL PRODUCTS               | 24,646         | 33,948    | 9,302          | 37.7                    |
| NON-ELECTRICAL MACHINERY                | 28,018         | 39,059    | 11,041         | 39.4                    |
| ELECTRICAL & ELECTRONIC EQUIP.          | 27,238         | 38,236    | 10,998         | 40.4                    |
| TRANSPORTATION EQUIP.                   | 33,248         | 46,977    | 13,729         | 41.3                    |
| INSTRUMENTS                             | 27,882         | 38,552    | 10,670         | 38.3                    |
| FOOD PROCESSING                         | 22,209         | 30,559    | 8,350          | 37.6                    |
| TEXTILES                                | 20,026         | 27,200    | 7,174          | 35.8                    |
| APPAREL                                 | 13,693         | 18,551    | 4,858          | 35.5                    |
| PAPER                                   | 25,099         | 34,574    | 9,475          | 37.8                    |
| PRINTING & PUBLISHING                   | 21,987         | 29,933    | 7,946          | 36.1                    |
| CHEMICALS                               | 32,735         | 46,202    | 13,467         | 41.1                    |
| RUBBER                                  | 20,451         | 27,966    | 7,515          | 36.7                    |
| TRANSPORTATION/PUBLIC UTILITIES         |                |           |                |                         |
| TRUCKING                                | 24,219         | 32,531    | 8,312          | 34.3                    |
| LOCAL/INTERURBAN TRANSIT                | 13,364         | 17,983    | 4,619          | 34.6                    |
| AIR TRANSPORTATION                      | 36,451         | 50,910    | 14,459         | 39.7                    |
| COMMUNICATION                           | 34,581         | 49,106    | 14,525         | 42.0                    |
| PUBLIC UTILITIES                        | 33,739         | 46,952    | 13,213         | 39.2                    |
| WHOLESALE TRADE                         | 26,692         | 36,639    |                | 37.3                    |
| RETAIL TRADE                            | 11,422         | 15,280    | 3,858          | 33.8                    |
| EATING & DRINKING PLACES                | 12,457         | 16,642    | 4,185          | 33.6                    |
| FINANCE/INSURANCE/REAL ESTATE           |                |           |                |                         |
| BANKING                                 | 20,219         | 27,809    | 7,590          | 37.5                    |
| INSURANCE                               | 24,491         | 33,769    | 9,278          | 37.9                    |
| 0112021 4 121111102                     | 31,523         | 43,834    | 12,311         | 39.1                    |
| REAL ESTATE                             | 19,938         | 28,048    | 8,110          | 40.7                    |
| SERVICES                                |                |           |                |                         |
| HOTELS                                  | 12,224         | 16,796    | 4,572          | 37.4                    |
| PERSONAL SERVICE & REPAIR               | 14,182         | 19,175    | 4,993          | 35.2                    |
| PRIVATE HOUSEHOLD                       | 7,920          | 10,440    | 2,520          | 31.8                    |
| AUTO REPAIR/SERVICE                     | 16,667         | 22,711    | 6,044          | 36.3                    |
| BUSINESS SERVICES                       | 20,219         | 28,029    | 7,810          | 38.6                    |
| AMUSEMENT & RECREATION MEDICAL SERVICES | 12,551         | 16,908    | 4,357          | 34.7                    |
|   | 14,315         | 20,322    | 6,007          | 42.0                    |
| MISC. PROFESSIONAL SERVICES             | 30,980         | 43,302    | 12,322         | 39.8                    |
| EDUCATIONAL SERVICES                    | 15,641         | 21,723    | 6,082          | 38.9                    |
| NON-PROFIT ORGANIZATIONS GOVERNMENT     | 10,571         | 14,100    | 3,529          | 33.4                    |
| STATE & LOCAL                           | 21,721         | 29,506    | 7,785          | 35.8                    |
| FEDERAL CIVILIAN                        | 20,951         | 28,221    | 7,270          | 34.7                    |
| FEDERAL CIVILIAN FEDERAL MILITARY       | 29,417         | 40,252    | 10,835         | 36.8                    |
| FLOCKAL FILLITARI                       | 11,687         | 16,832    | 5,145          | 44.0                    |

SOURCE: BOSTON REDEVELOPMENT AUTHORITY, RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC. OCTOBER 2, 1985.



industries will occur in air transportation (\$36,500), communications (\$34,500), public utilities (\$34,000), transportation equipment manufacturing (\$33,000), credit and finance (\$31,500) and miscellaneous professional services (legal, accounting, architecture and others, \$31,000). The lowest rates will occur in private household services (\$8,000), nonprofit organizations (\$10,500), retail trade (\$11,500), hotels (\$12,000), eating and drinking places (\$12,500), amusement and recreational services (\$12,500) and local/interurban transit (\$13,000). Most of the manufacturing industries, the rest of the services, finance, government and trucking and wholesale trade are in a middle range.

All of the industries will increase their average annual wages by over 30 percent from 1985 to 1990 (including inflation). Wage rates will grow fastest in communications and medical services (42 percent or 8.4 percent per year), transportation equipment manufacturing, printing and publishing and real estate (41 percent) and electrical and electronic equipment manufacturing, miscellaneous professional services and air transportation (40 percent). The slower rates will occur in private household services (32 percent or 6.4 percent per year), nonprofit organizations (33 percent), eating and drinking places, other retail trade and trucking (34 percent), and state and local government, amusement and recreation and local/interurban transit (35 percent).



#### VI. TRENDS AND PROJECTIONS BY OCCUPATION

This section provides more detail on the employment outlook for selected occupations in professional, managerial, sales, clerical, craft-related, operative, service and labor categories. The text below refers to Tables 1-3 in the Appendix.

# Professional and Technical Occupations

Medical workers except technicians had the most employees and the greatest absolute growth among the selected professional and technical occupations. Medical workers include registered nurses (64 percent of total in 1984), physicians, therapists and pharmacists. The Boston area's many hospitals and other health care facilities will continue to support a strong demand for the medical occupations.

growth in both number and percent throughout the period 1975-1985 and should continue above-average growth 1985-1990. These technicians are employed mainly in electrical and electronic equipment manufacturing, radio and television broadcasting and other manufacturing and communications industries. Computer programmers and computer systems analysts will account for over 400 net new jobs per year through 1990 to continue recent trends. After a stagnant year in 1983, renewed demand for lawyers and legal assistants will result in over 400 additional jobs per year through 1990. Those jobs will occur in a variety of service and finance-related industries. Job growth for medical laboratory technologists and technicians will fall off slightly in the next five years, as will growth in buyers in retail and wholesale trade. The



growth in jobs for vocational education teachers will accelerate from 1985 to 1990 after a lull in demand from 1978 to 1984.

The Boston area's architectural and engineering firms lent primary support to the 7,700 drafters in the area in 1984. Growth in employed drafters will pick up from 1984 through 1990 after a slowdown in the early 1980s. Commercial and graphic artists and designers will gradually increase their significant presence in a variety of business types.

Boston, in particular, is a center for jobs for professional and technical workers. Much of the new office space in the city is being filled by financial businesses, law firms, insurance companies, and a variety of business services. At the same time, medical services continue to expand in Boston.

#### Managers, Officials and Proprietors

Store managers led this category with over 16,000 employees in 1984, and will experience the highest annual absolute and percentage growth through 1990. The outlook for restaurant, cafe and bar managers from 1985 to 1990 is somewhat better than the prospects for retail sales managers, renewing a trend that was reversed during 1983 to 1985. Jobs for wholesalers will increase the least among the selected occupations in this category. The locations of the new jobs will likely be shopping malls, large mixed-use developments in Boston and smaller ventures in newly developed suburban or redeveloped urban areas.



## Sales Workers

Sales workers are a major occupational group in the Boston area, numbering over 124,000 in 1984. The growth in sales clerks (1,800 in 1983) will subside somewhat in the late 1980s, but will remain over 1,000 jobs per year. This outlook is much better than the experience during 1975 to 1983 when jobs for sales clerks increased by about 400 per year. The "All Other Sales Workers" category will continue to experience high annual rates of growth, adding over 450 jobs per year from 1985 to 1990.

### Clerical Workers

In 1984, secretaries (53,000), general office clerks (52,000), cashiers (32,000) and office machine operators (22,000) were the largest occupational groups among clerical workers, and will expand by the greatest absolute number of jobs. However, the highest annual rates of job growth from 1985 to 1990 will occur for computer operators (5.6% or 330 jobs per year), peripheral electronic data processing equipment operators (4.6% or 62 jobs per year), medical insurance clerks (4.0% or 73 jobs per year), library assistants (3.7% or 75 jobs annually) and cashiers (3.4% or 1,128 jobs per year).

Clerical workers are employed in nearly all types of industries.

The primary employers are banks, insurance companies, credit agencies, business services, medical services and government offices. However, all but the smallest businesses have one or more clerical workers for handling bills, orders, correspondence, payroll and the multiple other operational requirements. Therefore, new clerical jobs will be located



throughout the Boston Metro Area with a concentration in the City of Boston's burgeoning office-related industries.

#### Craft and Related Workers

Construction craft workers numbered over 34,000 in 1984. Within that subcategory, carpenters (9,000), electricians (7,700), plumbers and pipe fitters (5,200) and painters and paperhangers (3,500) were the occupations with the most employment. The greatest absolute growth among construction craft workers during the 1985 to 1990 period will occur for carpenters (303 jobs per year), electricians (222 per year), plumbers and pipe fitters (150 annually) and painters (105 per year). The occupations with the highest annual rates of growth, 1985-1990, will be drywall applicators (3.4% or 21 per year), fitters—pipe laying (3.4% or only 4 per year), cement masons and terrazzo workers (3.3% or 44 per year), carpenters (3.2% or 303 per year) and tile setters (3.2% or 7 annually). Therefore, the job outlook looks most promising for carpenters.

The record-setting pace of office construction in the City of Boston in recent years and extensive residential and nonresidential building rehabilitation have sustained and will extend the strong demand for construction craft workers. These workers are employed mainly by construction companies, many of which are small and most of which are located outside of Boston. Recently, construction sites have been located primarily in Downtown Boston, Cambridge and along Routes 128 and 495.

Mechanics, repairers and installers are employed in a variety of manufacturing industries, communications and public utilities and



numerous types of repair shops. These businesses are less likely to be located in the City of Boston than the office-related industries. The occupations with the most employees in this subcategory of mechanics, repairers and installers are metalworking craft workers except mechanics (15,500), general utility maintenance repairers (14,000), automotive mechanics (13,000), industrial machinery repairers (5,500), machinists (4,300), and line installers and cable splicers (3,500).

The rates of job growth were high during 1983 and 1984 for most of the occupations in the mechanics, repairers and installers subcategory. For 1985 to 1990, the leading occupations in terms of annual growth rates will be computer service technicians (6.3% or 94 jobs per year), electric motor repairers (3.8% or 15 jobs annually), office machine repairers (3.5% or 41 jobs per year), automotive mechanics (3.4% or 471 jobs annually) and millwrights (3.2% or 42 jobs per year).

Considering rate and absolute growth, automotive mechanics, machinists, general utility maintenance repairers, sheetmetal workers and tinsmiths, and computer service technicians have promising job outlooks in the next five years.

Among other craft and related workers, the job outlook is especially favorable for heavy equipment operators (3.1% or 155 jobs per year, 1985-1990).

Operatives include assemblers and machine operators. The Boston Metro Area had 245,000 operatives in 1984 and will expand to 273,000 by 1990. The primary occupational groups in this category in 1984 were electrical and electronic assemblers (16,000), machine tool operators (19,000), bus drivers (12,300), and sewers and stitchers (12,000).



The best job prospects, in terms of absolute annual growth 1985-1990, will be in assembler occupations, especially electrical and electronic assemblers (342 jobs per year), all other assemblers (235 jobs annually), machine tool operators (513 jobs per year in a variety of categories), welders and flamecutters (175 jobs per year) and bus drivers (412 jobs annually).

The highest annual rates of job growth, 1985-1990, will occur for instrument makers (4.8% or 94 jobs per year), numerical control machine tool operators (3.5% or 61 jobs per year) and bus drivers and ambulance drivers and ambulance attendants (3.3% each).

Operatives find jobs in a variety of industries, from manufacturing of fabricated metals, electrical and electronic equipment, and textiles, to transportation services and construction. Those workplaces are located in and near the major cities of the Boston Metro Area as well as along Routes 128 and 495.

#### Service Workers

This diverse group of workers is located in a variety of workplaces throughout the Boston Metro Area. Restaurants, office buildings, health clinics, social service agencies, and landscaping companies are a few of the employers of service workers.

Food service workers dominate this category. In 1984, the Boston Metro Area employed 35,300 waiters and waitresses; 25,700 cooks and chefs; 19,300 kitchen helpers; and 17,400 fast food restaurant food preparation and service workers. Building custodians (62,800) and gardeners and groundskeepers, except farm (8,600), were the next largest occupations.



From 1985 to 1990, job prospects are brightest for building custodians (1,850 jobs per year), food service workers in all categories (with the exception of butchers and meatcutters) who will see job growth amounting to 3,000 per year, child care attendants and child care workers (290 jobs per year, combined) and gardeners and groundskeepers except farm (190 per year). The Boston Metro Area's services-based economy will sustain job opportunities for service workers.

#### Laborers Except Farm

Stock handlers (19,000 in 1984) and trades helpers (9,800 in 1984) will continue to provide new jobs in the Boston Metro Area. Although annual growth rates, 1985-1990, will need to be above average, stock handlers will add 224 jobs per year and trades helpers will add 262 jobs per year. Jobs for laborers are generally related to manufacturing, wholesale and retail trade and construction. Consequently, many of the jobs are located outside of the City of Boston.







APPENDIX



TABLE 1

EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990

BOSTON METROPOLITAN AREA\*

NUMBER OF EMPLOYEES

| OCCUPATION                                | 1975   | 1978        | 1983             | 1984   | 1005   | 1000   |
|---|--------|-------------|------------------|--------|--------|--------|
|   |        |             | 1703             | 1784   | 1985   | 1990   |
| PROFESSIONAL, TECHNICAL & RELATED WORKERS |        |             |                  |        |        |        |
| ENGINEERING & SCIENCE TECHNICIANS         |        |             |                  |        |        |        |
| BROADCAST TECHNICIANS                     | 237    | 263         | 2/3              |        |        |        |
| DRAFTERS                                  | 6.E27  | 241         | 261              |        | 291    |        |
| ELECTRICAL & ELECTRONIC TECHNICIANS       | 7.471  | 9,118       | 7,651            | 7,686  |        |        |
| MEDICAL WORKERS EXCEPT TECHNICIANS        | 32,418 | 7,110       | 11,074           |        |        | 16,220 |
| HEALTH TECHNOLOGISTS & TECHNICIANS        | 9,806  |             | 42,971<br>12,840 | 44,876 | 46,595 | 55,203 |
| CLINICAL LABORATORY TECHNICIONE           | 3,444  |             |                  |        |        | 16,206 |
| BIOCHEMISTRY TECHNOLOGIST                 | 189    | . 5 , 1 , 0 | .,               | 4,633  | 4,796  |        |
| BLOOD BANK TECHNOLOGY SPECIALISTS         | 290    | 207<br>325  | 246              | 253    | 262    | 303    |
| MEDICAL LABORATORY TECHNICIANS            |        |             |                  | 399    | 416    | 492    |
| MEDICAL LABORATORY TECHNOLOGISTS          | 1 470  | 1,058       | 1,188            | 1,216  | 1,245  | 1,363  |
| DENTAL HYGIENISTS                         | 774    | 1,818       |                  | 2,288  |        |        |
| DIETETIC TECHNICIANS                      | 252    | 884         |                  | 1,159  |        |        |
| HEALTH RECORD TECHNICIANS                 | 356    | 288         | 339              | 348    | 363    | 432    |
| PHYSICAL THERAPY ASSISTANTS               | 493    | 397         |                  | 489    | 301    |        |
| PHYSICIAN ASSISTANTS                      | 357    | 567         |                  | 734    |        |        |
|   | 257    | 381         | 416              | 437    | 444    | 481    |
| OTHER PROFESSIONAL & TECHNICAL HORKERS    |        |             |                  |        |        |        |
|   |        |             |                  |        |        |        |
| TOOL PROGRAMMERS NUMERICAL CONTROL        | 184    | 243         | 302              | 337    | 357    | 462    |
| COMPUTER PROGRAMMERS                      | 4,766  | 5,868       |                  | 8,413  |        | 11,187 |
| COMPUTER SYSTEMS ANALYSTS                 | 3,768  | 4,688       | . , ,            | 6,894  | -,-,-  | 9,333  |
| VOCATIONAL EDUCATION TEACHERS             |        | 1,972       | -,               | 2,343  | 2,441  | 3,165  |
| COMMERCIAL & GRAPHIC ARTISTS & DESIGNERS  | 1,170  | 1,346       | -,               |        |        | 2,092  |
| PHOTOGRAPHERS                             | 844    | 897         | 993              | 1,027  | -,     | 1,154  |
| RADIO & TV ANNOUNCERS & NEWSCASTERS       | 739    | 739         | 810              | 827    | 858    | 935    |
| BUYERS RETAIL & WHOLESALE TRADE           | 3,939  | 4,034       | 4,423            | 4,598  | 4.719  | 5,164  |
| CURRICULUM SPECIALISTS                    | 525    | 556         | 563              | 581    | 591    | 704    |
| LAW CLERKS                                | 824    | 949         |                  | 1,127  |        |        |
| LAMYERS                                   | 4,670  | 5,488       | 6,810            | 6,806  |        |        |
| LEGAL ASSISTANTS                          | 785    | 982         |                  |        | 1,447  |        |
|   |        |             | -,-,             | 2,331  | 1)77/  | 49734  |



TABLE 1

EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990
BOSTON METROPOLITAN AREA\*
NUMBER OF EMPLOYEES

| OCCUPATION                                      | 1975           | 1978                 | 1983    | 1984                  | 1985          | 1990            |
|---|----------------|----------------------|---------|-----------------------|---------------|-----------------|
| MANAGERS, OFFICIALS & PROPRIETORS               |                |                      |         |                       |               |                 |
|   |                |                      |         |                       |               |                 |
| RESTAURANT CAFE & BAR MANAGERS                  | 5,951          | 6,879                | 8,027   | 8,185                 | 8,348         | 9,280           |
| SALES MANAGERS RETAIL TRADE STORE MANAGERS      | 4,453          | 4,527                | 5,135   | 5,331                 | 5,447         | 5,820           |
| WHOLESALERS                                     | 13,987         | 14,532               | 15,470  | 16,135                | 16,674        | 18,898          |
| MINULESALERS                                    | 3,299          | 3,301                | 3,942   | 4,081                 | 4,137         | 4,238           |
| SALES WORKERS                                   | 105,747        | 100 770              | 100 705 |                       |               |                 |
|   | 103,747        | 109,772              | 120,385 | 124,391               | 127,964       | 140,633         |
| SALES CLERKS                                    | 49,339         | 50,450               | 52,496  | 54,301                | 55,709        | 60.030          |
| ALL OTHER SALES WORKERS                         | 12,637         | 13,988               | 15,672  | 16,239                | 16,883        | 60,919          |
| CLERICAL HORKERS                                | 7/16 7/10      | 7/0 7/7              |         |                       | ,             | 27,420          |
| *************                                   | 344,568        | 368,163              | 409,596 | 422,594               | 434,153       | 483,483         |
| BANK TELLERS                                    | 9,911          | 10,164               | 12,971  | 12 000                |               |                 |
| ACCOUNTING CLERKS                               | 13,611         | 14,405               | 15,640  | 12,808                | 13,195        | 14,332          |
| BOOKKEEPERSHAND                                 | 15,716         | 16,371               | 17,791  | 16,043                | 16,404        | 17,673          |
| CAR RENTAL CLERKS                               | 250            | 289                  | 313     | 18,017<br>2 <b>97</b> | 18,405        | 19,632          |
| CASHIERS  | 25,543         | 27,541               | 31,051  | 32,367                | 308           | 339             |
| CHECKING CLERKS                                 | 363            | 362                  | 449     | 441                   | 33,604        | 39,243          |
| CIRCULATION CLERKS                              | 163            | 165                  | 185     | 189                   | 452           | 482             |
| CLAIMS CLERKS                                   | 1,350          | 1,505                | 1,790   | 1,876                 | 191           | 197             |
| FILE CLERKS                                     | 6,149          | 6,497                | 7,012   | 6,998                 | 1,950         | 2,286           |
| GENERAL CLERKS OFFICE                           | 42,270         | 45,107               | 50,528  | 52,177                | 7,127         | 7,556           |
| INSURANCE CLERKS EXCEPT MEDICAL                 | 198            | 216                  | 268     | 267                   | 53,698        | 60,316          |
| INSURANCE CLERKS MEDICAL                        | 1,144          | 1,312                | 1,651   | 1,743                 | 277           | 315             |
| LIBRARY ASSISTANTS                              | 1,734          | 1,848                | 1,926   | 1,990                 | 1,817         | 2,183           |
| LICENSE CLERKS                                  | 138            | 141                  | 134     | 136                   | 2,029         | 2,402           |
| MAIL CARRIERS & POSTAL CLERKS                   | 9,567          | 9,676                | 8,729   | 11,304                | 137           | 152             |
| METER READERS UTILITIES                         | 399            | 408                  | 415     | 423                   | 11,136        | 10,763          |
| MORTGAGE CLOSING CLERKS                         | 209            | 231                  | 317     | 318                   | 430           | 446             |
| OFFICE MACHINE OPERATORS                        | 17,319         | 18,921               | 21,958  | 22,402                | 334<br>23,083 | 387             |
| BOOKKEEPING BILLING MACHINE OPERATORS           | 2,963          | 3,109                | 3,532   | 3,600                 | 3,692         | 25,759<br>4,031 |
| PROOF MACHINE OPERATORS                         | 1,018          | 1,005                | 1,242   | 1,217                 | 1,245         | 1,320           |
| TRANSIT CLERKS                                  | 156            | 154                  | 189     | 185                   | 189           | 199             |
| COMPUTER OPERATORS                              | 3,241          | 3,937                | 5,247   | 5,525                 | 5,856         | 7,489           |
| DATA ENTRY OPERATORS                            | 6,652          | 6,986                | 7,275   | 7,293                 | 7,347         | 7,198           |
| PERIPHERAL EDP EQUIPMENT OPERATORS              | 763            | 916                  | 1,221   | 1,262                 | 1,331         | 1,639           |
| DUPLICATING MACHINE OPERATORS                   | 721            | 794                  | 888     | 895                   | 917           | 1,008           |
| ALL OTHER OFFICE MACHINE OPERATORS ORDER CLERKS | 1,696          | 1,893                | 2,238   | 2,289                 | 2,369         | 2,721           |
| PAYROLL & TIMEKEEPING CLERKS                    | 4,567          | 4,804                | 5,351   | 5,545                 | 5,683         | 6,085           |
| PERSONNEL CLERKS                                | 3,288          | 3,562                | 3,920   | 4,091                 | 4,239         | 4,845           |
| POLICY CHANGE CLERKS                            | 1,786          | 1,963                | 2,144   | 2,326                 | 2,393         | 2,696           |
| PROCUREMENT CLERKS                              | 780            | 810                  | 878     | 856                   | 874           | 923             |
| PRODUCTION CLERKS                               | 898            | 1,009                | 1,087   | 1,187                 | 1,224         | 1,376           |
| RATE CLERKS FREIGHT                             | 4,053          | 4,657                | 5,169   | 5,552                 | 5,740         | 6,488           |
| REAL ESTATE CLERKS                              | 140            | 150                  | 136     | 137                   | 141           | 151             |
| RECEPTIONISTS                                   | 267            | 290                  | 354     | 402                   | 419           | 470             |
| SECRETARIES                                     | 5,569          | 6,301                | 7,744   | 7,978                 | 8,305         | 9,771           |
| STENOGRAPHERS                                   | 41,507         | 45,571               | 52,278  | 53,125                | 54,843        | 62,616          |
| TYPISTS   | 6,007          | 6,086                | 5,921   | 5,985                 | 6,003         | 6,087           |
| SERVICE CLERKS                                  | 19,604         | 20,794               | 22,397  | 23,006                | 23,481        | 25,813          |
| SHIPPING & RECEIVING CLERKS                     | 405            | 429                  | 475     | 498                   | 517           | 600             |
| SHIPPING PACKERS                                | 6,716          | 7,043                | 7,413   | 7,696                 | 7,868         | 8,306           |
| SORTING CLERKS BANKING                          | 5,969          | 6,284                | 6,540   | 6,791                 | 6,937         | 7,240           |
| STATEMENT CLERKS                                | 156            | 154                  | 191     | 137                   | 192           | 204             |
| STOCK CLERKS STOCKROOM & WAREHOUSE              | 672            | 674                  | 849     | 836                   | 859           | 929             |
| SWITCHBOARD OPERATORS RECEPTIONISTS             | 15,621         | 16,230               | 17,179  | 17,805                | 18,172        | 19,371          |
| TELEGRAPH OPERATORS                             | 3,484          | 3,873                | 4,576   | 4,642                 | 4,820         | 5,512           |
| TELEPHONE OPERATORS                             |                | 89                   | 98      | 103                   | 106           | 114             |
| SMITCHBOARD OPERATORS                           | 6,936<br>3,074 | 6,743                | 7,089   | 7,200                 | 7,280         | 7,390           |
| CENTRAL OFFICE OPERATORS                        | 2,858          | 3,378                | 3,901   | 3,961                 | 4,079         | 4,528           |
| DIRECTORY ASSISTANCE OPERATORS                  | 904            | 2,54 <b>8</b><br>817 | 2,358   | 2,382                 | 2,340         | 2,018           |
|   | 704            | 01/                  | 830     | 856                   | 860           | 844             |



TABLE 1

EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990
BOSTON METROPOLITAN AREA\*
NUMBER OF EMPLOYEES

| CCUPATION  | 1975            | 1978           | 1983           | 1984         | 1985         | 1990         |
|--|-----------------|----------------|----------------|--------------|--------------|--------------|
| CRAFT & RELATED WORKERS  |                 |                | 70 Can dan can | ~~~          |              |              |
| CONCENICATION COLET HORIZON  |                 |                |                |              |              |              |
| CONSTRUCTION CRAFT WORKERS INSULATION WORKERS                      | 31,154          | 29,567         | 31,880         | 34,263       | 35,471       | 40,689       |
| BRICKLAYERS  | 637             | 591            | 640            | 699          | 726          | 838          |
| STONE MASONS   | 1,042           | 916            | 1,008          | 1,077        | 1,115        | 1,282        |
| CARPENTERS   | 64              | 57             | 54             | 60           | 60           | 60           |
| CEMENT MASONS & TERRAZZO WORKERS                                   | 8,082           | 7,676          | 8,434          | 9,020        | 9,363        | 10,877       |
| DRYHALL APPLICATORS AND TAPERS                                     | 1,219           | 1,069          | 1,190          | 1,279        | 1,328        | 1,547        |
| DRYWALL APPLICATORS  | 841             | 727            | 816            | 877          | 912          | 1,066        |
| TAPERS   | 560<br>282      | . 484          | 544            | 585          | 608          | 712          |
| ELECTRICIANS   | 6,876           | 243            | 272            | 292          | 304          | 354          |
| FITTERS PIPELAYING   | 96              | 6,803<br>83    | 7,143<br>94    | 7,695        | 7,953        | 9,062        |
| FLOOR COVERING INSTALLERS  | 764             | 722            | 781            | 101<br>825   | 105          | 123          |
| GLAZIERS   | 579             | 559            | 609            | 643          | 854          | 971          |
| IRONIHORKERS   | 1,386           | 1,230          | 1,332          | 1,434        | 665<br>1,483 | 755<br>1,696 |
| LATHERS  | 150             | 120            | 115            | 120          | 121          | 116          |
| PAINTERS & PAPERHANGERS  | 3,085           | 2,997          | 3,309          | 3,528        | 3,647        | 4,186        |
| PAINTERS CONSTRUCTION & MAINTENANCE .                              | 2,987           | 2,913          | 3,218          | 3,431        | 3,546        | 4,073        |
| PAPERHANGERS   | 96              | 81             | 87             | 93           | 96           | 108          |
| PLASTERERS   | 223             | 183            | 185            | 196          | 199          | 208          |
| PLUMBERS & PIPEFITTERS   | 4,705           | 4,552          | 4,806          | 5,234        | 5,414        | 6,170        |
| ROOFERS  | 978             | 834            | 908            | 971          | 1,004        | 1,137        |
| TILE SETTERS   | 197             | 173            | 193            | 206          | 214          | 248          |
| MECHANICS REPAIRERS & INSTALLERS                                   | 57,096          | 60,161         | 65,070         | 68,234       | 70,268       | 78,619       |
| AIR CONDITIONING REFRIG.& HEATING MECH.                            | 2,088           | 2,021          | 2,201          | 2,349        | 2,425        | 2,748        |
| APPLIANCE INSTALLERS & REPAIRERS                                   | 977             | 989            | 1,024          | 1,056        | 1,081        | 1,154        |
| AUTOMOTIVE BODY REPAIRERS  | 1,763           | 1,948          | 2,103          | 2,102        | 2,179        | 2,446        |
| AUTO SEAT COVER & TOP INSTALLERS                                   | 68              | 80             | 89             | 85           | 89           | 101          |
| AUTOMOTIVE MECHANICS   | 10,486          | 11,419         | 12,829         | 13,326       | 13,853       | 16,208       |
| COIN MACHINE SERVICERS & REPAIRERS                                 | 452             | 477            | 509            | 520          | 536          | 597          |
| COMMUNICATION EQUIPMENT MECHANICS                                  | 2,306           | 2,049          | 2,017          | 2,067        | 2,062        | 1,944        |
| COMPUTER SERVICE TECHNICIANS                                       | 668             | 822            | 1,286          | 1,397        | 1,494        | 1,966        |
| DIESEL MECHANICS   | 2,622           | 2,756          | 2,965          | 3,025        | 3,099        | 3,366        |
| ELECTRICAL INSTRUMENT & TOOL REPAIRERS                             | 177             | 204            | 257            | 286          | 298          | 329          |
| ELECTRIC MOTOR REPAIRERS   | 264             | 295            | 363            | 383          | 406          | 483          |
| LINE INSTALLERS & CABLE SPLICERS                                   | 3,382           | 3,228          | 3,410          | 3,578        | 3,640        | 3,831        |
| ENGINEERING EQUIPMENT MECHANICS                                    | 1,188           | 1,160          | 1,253          | 1,334        | 1,344        | 1,372        |
| INSTRUMENT REPAIRERS   | 606             | 680            | 729            | 763          | 791          | 898          |
| INDUSTRIAL MACHINERY REPAIRERS                                     | 4,635           | 5,109          | 5,176          | 5,579        | 5,773        | 6,487        |
| MAINTENANCE REPAIRERS GENERAL UTILITY MARINE MECHANICS & REPAIRERS | 11,303          | 12,217         | 13,476         | 13,987       | 14,437       | 16,357       |
| MILLWRIGHTS  | 195             | 237            | 213            | 246          | 256          | 279          |
| OFFICE MACHINE REPAIRERS   | 1,032           | 1,132          | 1,161          | 1,248        | 1,304        | 1,513        |
| RADIO & TELEVISION SERVICE TECHNICIANS                             | 689             | 780            | 1,072          | 1,143        | 1,194        | 1,401        |
| TELEPHONE & PBX INSTALLERS & REPAIRERS                             | 866             | 905            | 996            | 1,040        | 1,073        | 1,200        |
| METALWORKING CRAFT WORKERS EXCEPT MECHANICS                        | 3,075           | 2,837          | 2,984          | 3,109        |              | 3,212        |
| MACHINISTS & LAYOUT MARKERS  | 12,659<br>3,859 | 14,335         | 14,251         | 15,480       | 16,069       | 18,151       |
| LAYOUT MARKERS METAL   | 246             | 4,449          | 4,544          | 4,878        | 5,069        | 5,742        |
| MACHINISTS   |                 | 279            | 278            | 302          | 313          | 348          |
| JOB & DIE SETTERS  | 3,430           | 3,950          | 4,050          | 4,339        | 4,507        | 5,102        |
| MACHINE TOOL SETTERS METALWORKING                                  | 1,605<br>925    | 1,935<br>1,128 | 1,916          | 2,090        | 2,192        | 2,523        |
| PUNCH PRESS SETTERS METAL  | 319             | 384            | 1,132<br>384   | 1,232        | 1,287        | 1,477        |
| SHEETMETAL WORKERS & TINSMITHS                                     | 2,913           | 2,989          | 3,094          | 417<br>3,399 | 438<br>3,511 | 499          |
| TOOLMAKERS & DIEMAKERS   | 2,457           | 2,911          | 2,809          | 3,060        | 3,168        | 3,992        |
|  | .,              | -, / 3. 3.     | 0,007          | 3,000        | 3,100        | 3,545        |



TABLE 1 EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990 BOSTON METROPOLITAN AREA\* NUMBER OF EMPLOYEES

| OCCUPATION                                    | 1975           | 1978           | 1983         | 1984   | 1985   | 1990   |
|---|----------------|----------------|--------------|--------|--------|--------|
| ALL OTHER METALWORKING CRAFT WORKERS          | 150            | 177            | 1/2          | 77/    |        |        |
| PRINTING TRADES CRAFT WORKERS                 | 8,324          | 8,510          | 162          | 176    | 187    | 219    |
| TYPESETTERS & COMPOSITORS                     | 2,081          | 2,036          | 9,325        | 9,581  | 9,669  | 9,864  |
| LITHOGRAPHERS & PHOTOENGRAVERS                | 1,462          | 1,504          | 2,065        |        | 2,066  | 1,951  |
| CAMERA OPERATORS PRINTING                     | 466            | 484            | 564          | 1,794  | 1,817  | 1,899  |
| PHOTOENGRAVERS                                | 190            | 181            | 179          | 586    | 595    | 629    |
| PLATEMAKERS                                   | 283            | 289            | 328          | 181    | 177    | 157    |
| STRIPPERS PRINTING                            | 521            | 549            |              | 338    | 341    | 351    |
| PRINTING PRESS OPERATORS                      | 3,628          | 3,753          | 661<br>4,146 | 688    | 702    | 760    |
| LETTER PRESS OPERATORS                        | 754            | 742            | 795          | 4,267  | 4,321  | 4,484  |
| OFFSET LITHOGRAPHIC PRESS OPERATORS           | 1,859          | 1,927          |              | 808    | 805    | 779    |
| PRESS OPERATORS & PLATE PRINTERS              | 785            | 853            | 2,243        | 2,338  | 2,374  | 2,514  |
| ALL OTHER PRESS & PLATE PRINTERS              | 229            | 231            | 851          | 857    | 876    | 921    |
| OTHER CRAFT & RELATED WORKERS                 | 53,043         | 57,981         | 258          | 265    | 266    | 269    |
| BAKERS  | 1,049          | 1,064          | 60,234       | 63,877 | 66,019 | 74,033 |
| CABINETMAKERS                                 | 717            | 754            | 1,078        | 1,112  | 1,137  | 1,224  |
| CRANE DERRICK & HOIST OPERATORS               | 1,079          | 1,134          | 758          | 807    | 832    | 915    |
| DENTAL LAB TECHNICIANS                        | 819            | 937            | 1,141        | 1,227  | 1,267  | 1,421  |
| FURNITURE FINISHERS                           | 167            | 178            | 1,022        | 1,042  | 1,072  | 1,201  |
| FURNITURE UPHOLSTERERS                        | 199            |                | 196          | 206    | 216    | 249    |
| HEAVY EQUIPMENT OPERATORS                     | 4,850          | 202            | 219          | 224    | 231    | 248    |
| TAILORS                                       |                | 4,583          | 4,810        |        | 5,213  | 5,989  |
| UPHOLSTERERS                                  | 1,055          | 1,082          | 1,132        | 1,173  | 1,212  | 1,341  |
| UPHOLSTERY CUTTERS                            | 115<br>46      | 121            | 101          | 108    | 110    | 111    |
| UPHOLSTERY WORKERS NEC                        |                | 48             | 39           | 41     | 42     | 42     |
|   | 100            | 106            | 88           | 93     | 95     | 95     |
| OPERATIVES                                    |                |                |              |        |        |        |
| ASSEMBLER OCCUPATIONS                         | 32,074         | 70 720         | 47 056       |        |        |        |
| ASSEMBLERS                                    |                |                | 43,050       | 46,613 | 48,506 | 54,297 |
| ELECTRICAL MACHINERY CONTRACTOR               | 4,252          | 4,792          | 4,308        | 4,600  | 4,804  | 5,275  |
| ELECTRICAL & ELECTRONIC ASSEMBLERS            | 3,252          | 4,024          | 4,919        | 5,282  | 5,517  | 6,384  |
| INSTRUMENT MAKERS                             | 10,108         | 12,197         | 15,047       | 16,305 | 16,931 | 18,642 |
| MACHINE ASSEMBLERS                            | 1,136          | 1,504          | 1,717        | 1,833  | 1,940  | 2,409  |
| ALL OTHER ASSEMBLERS                          | 2,600          | 3,122          | 3,158        | 3,445  | 3,591  | 4,048  |
| BINDERY OPERATIVES                            | 6,320<br>2,080 | 7,866          | 8,374        | 9,136  | 9,551  | 10,724 |
| METALWORKING OPERATIVES                       | 22,776         | 2,065          | 2,214        | 2,249  | 2,246  | 2,167  |
| MACHINE TOOL OPERATORS                        | 15,505         | 26,791         | 25,914       | 28,292 | 29,383 | 32,994 |
| PRILL BROOM A STATE OF                        | 1,978          | 18,403         | 17,732       | 19,371 | 20,107 | 22,670 |
| GRINDING & ABRADING MACHINE OPERATOR METAL    | 1,770          | 2,345          | 2,253        | 2,452  | 2,546  | 2,876  |
| LATHE MACHINE OPERATORS METAL                 | 2,620          | 2,320<br>3,054 | 2,125        | 2,295  | 2,369  | 2,589  |
| MILLING                                       | 1,137          |                | 2,849        | 3,092  | 3,197  | 3,531  |
| MACHINE TOOL OPERATORS COMBINATION            | 2,772          | 1,387          | 1,301        | 1,422  | 1,457  | 1,620  |
| MACHINE TOOL OPERATORS NUMERICAL CONTROL      | 1,195          | 3,340          | 3,344        | 3,720  | 3,878  | 4,450  |
| MACHINE TOOL OPERATORS TOOL ROOM              |                | 1,465          | 1,524        | 1,678  |        | 2,053  |
| PUNCH PRESS OPERATORS METAL                   | 567            | 687            | 679          | 745    | 772    | 893    |
| POWER BRAKE BENDING MACHINE OPERATORS METAL   | 2,230          | 2,665          | 2,538        | 2,748  | 2,873  | 3,230  |
| SHEAR & SLITTER OPERATORS METAL               |                | 732            | 720          | 785    | 815    | 923    |
| WELDERS & FLAMECUTTERS                        | 313            | 365            | 360          | 390    | 406    | 456    |
| PAINTERS AUTOMOTIVE                           | 5,878          | 6,739          | 6,533        | 7,131  | 7,414  | 8,291  |
| PAINTERS PRODUCTION                           | 472            | 540            | 606          | 598    | 626    | 724    |
| SEWERS & STITCHERS                            | 1,570          | 1,882          | 1,780        | 1,951  | 2,027  | 2,257  |
| SEWING MACHINE OPRS. REGULAR EQUIP. GARMENT   | 14,387         | 14,389         | 11,881       | 12,008 | 12,143 | 11,561 |
| SEWING MACHINE OPRS. SPECIAL EQUIP. GARMENT   | 9,033          | 8,835          | 7,186        | 7,254  | 7,335  | 6,874  |
|   | 1,307          | 1,283          | 1,053        | 1,065  | 1,080  | 1,021  |
| SEWING MACHINE OPRS. REGULAR EQUIP. NONGARMEN | 2,497          | 2,682          | 2,293        | 2,331  | 2,361  | 2,333  |
| SEWING MACHINE OPRS. SPECIAL EQUIP. NONGARMEN | 941            | 980            | 822          | 830    | 836    | 818    |
| ALL OTHER SEWERS & STITCHERS                  | 378            | 375            | 282          | 277    | 274    | 241    |
| AMBULANCE DRIVERS & AMBULANCE ATTENDANTS      | 587            | 639            | 682          | 717    | 737    | 860    |
| BUSDRIVERS                                    | 10,722         | 11,524         | 11,784       | 12,298 | 12,507 | 14,629 |
| MISC. MACHINE OPERATIVES LUMBER & FURNITURE   | 305            | 366            | 339          | 371    | 387    | 432    |
| PHOTOGRAPHIC PROCESS WORKERS                  | 1,213          | 1,417          | 1,055        | 1,673  | 1,730  | 1,868  |
| RIVETERS                                      | 315            | 373            | 359          | 389    | 396    | 431    |
| ROTARY ORILL OPERATORS                        | 21             | 21             | 24           | 27     | 27     | 26     |
| ROTARY DRILL OPERATOR HELPERS                 | 16             | 15             | 20           | 20     | 19     | 16     |
| SANDBLASTERS & SHOTBLASTERS                   | 119            | 139            | 128          | 144    | 150    | 171    |
| SANDERS WOOD                                  | 139            | 157            | 139          | 149    |        |        |
|   | 157            | 131            | A = 2 /      | 147    | 155    | Lob    |
| TIRE CHANGERS & REPAIRERS WOOD MACHINISTS     | 1,011          | 1,067          | 1,168        | 1,223  | 155    | 166    |



TABLE 1

EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990
BOSTON METROPOLITAN AREA\*
NUMBER OF EMPLOYEES

| OCCUPATION                                       |              |                  |           |           |           |                |
|--|--------------|------------------|-----------|-----------|-----------|----------------|
| ***************************************          | 1975         | 1978             | 1983      | 1984      | 1985      | 1990           |
| OFFILITOR LIBRATOR                               |              |                  |           |           |           |                |
| SERVICE HORKERS                                  | 264,324      | 293,189          | 330,492   | 333,988   | 342,735   | 388,075        |
| BUILDIENG CUSTODIANS                             | / 0 =        |                  |           |           |           |                |
| FOOD SERVICE WORKERS                             | 49,529       | ,                | 61,853    |           | 64,790    | 74,047         |
| BUTCHERS & MEAT CUTTERS                          | 99,552       | ,                |           |           |           | 149,640        |
| COOKS & CHEFS                                    | 3,749        | -,               | 3,478     | 3,544     | - ,       | 3,473          |
| COOKS INSTITUTIONAL                              | 19,535       | ,_,              | 25,288    | 25,668    | 26,274    | 29,969         |
| COOKS RESTAURANT                                 | 7,979        | -,               | 9,370     | . ,       | 9,783     | 11,741         |
| COOKS SHORT ORDER & SPECIALTY FAST FOODS         | 4,988        | -,               | . ,       | . ,       | 7,415     | 8,398          |
| FOOD DOED & SERVICE LINES THE FAST FOODS         | 6,538        |                  | 8,765     | 8,888     |           |                |
| FOOD PREP. & SERVICE WKRS. FAST FOOD REST. HOSTS | 12,499       | ,                |           | 17,411    | 17,704    | 19,222         |
| KITCHEN HELPERS                                  | 1,763        |                  | 2,430     | 2,461     | 2,510     |                |
|  | 14,815       | 16,674           | 19,042    | 19,304    | 19,797    | 22,636         |
| MAITERS & WAITRESSES                             | 25,800       | 16,674<br>29,784 | 34,957    | 35,337    | 36,023    |                |
| ALL OTHER FOOD SERVICE MORKERS                   | 9,409        | 10,367           | 11,691    | 12,000    | 12,282    | 13,755         |
| SELECTED HEALTH SERVICE WORKERS                  |              |                  |           |           |           |                |
| DENTAL ASSISTANTS                                | 1,733        | 1 077            | 0 (07     |           |           |                |
| HEALTH AIDES EXCEPT NURSING                      | 143          |                  | 2,401     |           |           | ,              |
| MEDICAL ASSISTANTS                               |              |                  |           |           | 205       | 240            |
| NURSING AIDES ORDERLIES & ATTENDANTS             | 27 (27       | 1,446<br>26,315  | 1,747     | 1,857     | 1,911     | 2,205          |
| PHARMACY HELPERS                                 | 23,027       | 20,315           |           |           |           |                |
| PSYCHIATRIC AIDES                                | 541<br>2,130 |                  |           |           |           |                |
| SELECTED PERSONAL SERVICE WORKERS                | 2,250        | 2,324            | 2,704     | 2,030     | C) 744    | 3,370          |
|  |              |                  |           |           |           |                |
| BARBERS  | 500          | 532              | 637       | 662       | 697       | 810            |
| CHILD CARE ATTENDANTS                            | 348          |                  |           |           | - , ,     | 553            |
| CHILD CARE WORKERS                               | 2,626        |                  | 3,744     | 3.768     | 7 557     | 4 74 4         |
| COSMETOLOGISTS                                   | 3,945        | -,               | 4,748     | - ,       | 5,144     | 5,810          |
| COSMETOLOGISTS WOMEN'S HAIRSTYLISTS              | 3,628        | .,               | 4,366     | 4,510     | 4,731     | 5,345          |
| MANICURISTS                                      | 127          | -,               | 154       | 159       |           | 189            |
| SHAMPOOERS & SCALP TREATMENT OPERATORS           | 191          |                  | 228       | 235       |           |                |
| HOUSEKEEPERS HOTEL & MOTEL                       | 1,125        |                  |           |           |           |                |
| WELFARE SERVICE AIDES                            | 1,701        | -,               | 2,071     |           |           |                |
| GARDENERS & GROUNDSKEEPERS EXCEPT FARM           | 7,602        |                  | 8,593     |           |           | 2,469<br>9,711 |
| I ADODEDC EVERT FARM                             |              |                  |           |           | -,        | ,,,,,,         |
| LABORERS EXCEPT FARM                             |              |                  |           |           |           |                |
| HELPERS TRADES                                   | 9.073        | 8,757            | 9.259     | 9 790     | 10,100    | 33 633         |
| STOCK HANDLERS                                   | 17.653       | 17.854           | 18.579    |           |           | ,              |
| ORDER FILLERS                                    | 5,070        | 17,854<br>6,070  | 6,667     | 19,161    | 19,547    |                |
| STOCK CLERK SALES FLOOR                          |              | 11,783           | 11,872    |           | 7,019     | . ,            |
|  | TT)/TD       | 11,703           | 11,072    | 12,258    | 12,527    | 13,422         |
| TOTAL ALL OCCUPATIONS                            | 1,599,540    | 1,731,116        | 1,894,319 | 1,960,134 | 2,018,086 | 2,276,745      |

SOURCE: BRA RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC.. NOVEMBER 13, 1985.

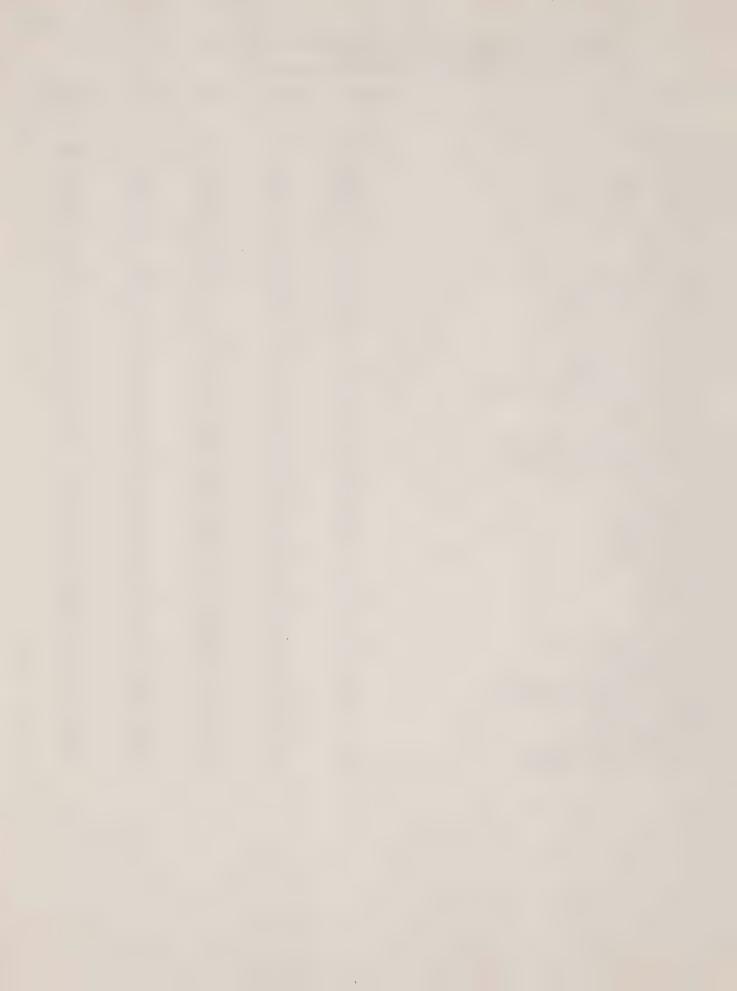


| OCCUPATION  | 1975-78          | 1978-83          | 1983-84          | 1984-85          | 1985-90          |
|---|------------------|------------------|------------------|------------------|------------------|
|   | ~ ~~~~           |                  |                  |                  |                  |
| PROFESSIONAL, TECHNICAL & RELATED WORKERS   |                  |                  |                  |                  |                  |
| ENGINEERING & SCIENCE TECHNICIANS   |                  |                  |                  |                  |                  |
| BROADCAST TECHNICIANS   | 1                | 4                | 21               | 9                | 5                |
| DRAFTERS  | 221              | 92               | 35               | 161              | 77               |
| ELECTRICAL & ELECTRONIC TECHNICIANS   | 496              | 555              | 995              | 635              | 539              |
| MEDICAL WORKERS EXCEPT TECHNICIANS  | 1,258            | 1,356            | 1,905            | 1,719            | 1,722            |
| HEALTH TECHNOLOGISTS & TECHNICIANS  | 362              | 389              | 602              | 470              | 459              |
| CLINICAL LABORATORY TECHNOLOGISTS & TECH.   | 118              | 131              | 178              | 163              | 150              |
| BIOCHEMISTRY TECHNOLOGIST   | 6                | 8                | 7                | 9                | 8                |
| BLOOD BANK TECHNOLOGY SPECIALISTS   | 12               | 13               | 11               | 17               | 15               |
| MEDICAL LABORATORY TECHNICIANS  | 25               | 26               | 28               | 29               | 24               |
| MEDICAL LABORATORY TECHNOLOGISTS  | 63               | 70               | 118              | 88               | 86               |
| DENTAL HYGIENISTS   | 37               | 39               | 82               | 28               | 30               |
| DIETETIC TECHNICIANS  | 12               | 10               | 9                | 15               | 14               |
| HEALTH RECORD TECHNICIANS   | 14               | 14               | 23               | 18               | 17               |
| PHYSICAL THERAPY ASSISTANTS   | 25               | 27               | 32               | 33               |                  |
| PHYSICIAN ASSISTANTS  | 8                | 7                | 21               | 7                | 3 <b>3</b><br>7  |
| TOOL PROGRAMMERS NUMERICAL CONTROL COMPUTER PROGRAMMERS COMPUTER SYSTEMS ANALYSTS | 20<br>367<br>307 | 12<br>423<br>346 | 35<br>428<br>474 | 20<br>484<br>411 | 21<br>458<br>406 |
| VOCATIONAL EDUCATION TEACHERS   | 85               |                  |                  |                  |                  |
| COMMERCIAL & GRAPHIC ARTISTS & DESIGNERS  | 59               | 62               | 61               | 98               | 145              |
| PHOTOGRAPHERS   |                  | 61               | 76               | 67               | 59               |
| RADIO & TV ANNOUNCERS & NEWSCASTERS   | 18               | 19               | 34               | 25               | 20               |
| BUYERS RETAIL & WHOLESALE TRADE   | 32               | 14<br>78         | 17               | 31               | 15               |
| CURRICULUM SPECIALISTS  | 10               | 70               | 175<br>18        | 121              | 89               |
| LAW CLERKS  | 42               | 36               |                  | 10               | 23               |
| LAWYERS   | 273              | 264              | - 1              | 41<br>314        | 42<br>335        |
| LEGAL ASSISTANTS  | 66               | 73               | - 4              | 90               | 101              |
| MANAGERS, OFFICIALS & PROPRIETORS   |                  |                  |                  |                  |                  |
|   |                  |                  |                  |                  |                  |
| RESTAURANT CAFE & BAR MANAGERS  | 309              | 230              | 158              | 163              | 186              |
| SALES MANAGERS RETAIL TRADE   | 25               | 122              | 196              | 116              | 75               |
| STORE MANAGERS  | 182              | 188              | 665              | 539              | 445              |
| WHOLESALERS   | 1                | 128              | 139              | 56               | 20               |
| SALES WORKERS   | 1,342            | 2,123            | 4,006            | 3,573            | 2,534            |
| SALES CLERKS  | 770              | 400              | 1 605            | 1 (00            | 3 0/-            |
| ALL OTHER SALES WORKERS   | 370              | 409              | 1,805            | 1,408            | 1,042            |
| ALL OTHER SALES MURKERS   | 450              | 337              | 567              | 644              | 467              |



TABLE 2

| OCCUPATION                             | 1975-78 | 1978-83 | 1983-84 | 1984-85 | 1985-90 |
|--|---------|---------|---------|---------|---------|
|  |         |         |         |         | *****   |
| CLERICAL WORKERS                       | 7,865   | 8,287   | 12,998  | 11,559  | 9,866   |
| BANK TELLERS                           | 96      | E/3     | 7/7     | 707     | 007     |
| ACCOUNTING CLERKS                      | 84      | 561     | - 163   | 387     | 227     |
| BOOKKEEPERSHAND                        | 265     | 247     | 403     | 361     | 254     |
| CAR RENTAL CLERKS                      | 218     | 284     | 226     | 388     | 245     |
| CASHIERS                               | 13      | 5       | - 16    | 11      | 6       |
| CHECKING CLERKS                        | 666     | 702     | 1,316   | 1,237   | 1,128   |
| CIRCULATION CLERKS                     | - 0     | 17      | ~ 8     | 11      | 6       |
| CLAIMS CLERKS                          | 1       | 4       | 4       | 2       | 1       |
| FILE CLERKS                            | 52      | 57      | 86      | 74      | 67      |
| GENERAL CLERKS OFFICE                  | 116     | 103     | - 14    | 129     | 86      |
| INSURANCE CLERKS EXCEPT MEDICAL        | 946     | 1,084   | 1,649   | 1,521   | 1,324   |
| INSURANCE CLERKS MEDICAL               | 6       | 10      | - 1     | 10      | 8       |
| LIBRARY ASSISTANTS                     | 56      | 68      | 92      | 74      | 73      |
| LICENSE CLERKS                         | 38      | 16      | 64      | 39      | 75      |
| MAIL CARRIERS & POSTAL CLERKS          | 1       | - 1     | 2       | 1       | 3       |
| METER READERS UTILITIES                | 36      | - 189   | 2,575   | - 168   | - 75    |
| MORTGAGE CLOSING CLERKS                | 3       | 1       | 8       | 7       | 3       |
| OFFICE MACHINE OPERATORS               | 7       | 17      | 1       | 16      | 11      |
|  | 534     | 607     | 444     | 681     | 535     |
| BOOKKEEPING BILLING MACHINE OPERATORS  | 49      | 85      | 68      | 92      | 68      |
| PROOF MACHINE OPERATORS TRANSIT CLERKS | - 4     | 47      | - 25    | 28      | 15      |
|  | - 1     | 7       | - 4     | 4       | 2       |
| COMPUTER OPERATORS                     | 232     | 262     | 278     | 331     | 327     |
| DATA ENTRY OPERATORS                   | 111     | 58      | 18      | 54      | - 30    |
| PERIPHERAL EDP EQUIPMENT OPERATORS     | 51      | 61      | 41      | 69      | 62      |
| DUPLICATING MACHINE OPERATORS          | 24      | 19      | 7       | 22      | 18      |
| ALL OTHER OFFICE MACHINE OPERATORS     | 66      | 69      | 51      | 80      | 70      |
| ORDER CLERKS                           | 79      | 109     | 194     | 138     | 80      |
| PAYROLL & TIMEKEEPING CLERKS           | 91      | 72      | 171     | 148     | 121     |
| PERSONNEL CLERKS                       | 59      | 36      | 182     | 67      | 61      |
| POLICY CHANGE CLERKS                   | 10      | 14      | - 22    | 18      | 10      |
| PROCUREMENT CLERKS                     | . 37    | 16      | 100     | 37      | 30      |
| PRODUCTION CLERKS                      | 201     | 102     | 383     | 188     | 150     |
| RATE CLERKS FREIGHT                    | 3       | - 3     | 1       | 4       | 2       |
| REAL ESTATE CLERKS                     | 8       | 13      | 48      | 17      | 10      |
| RECEPTIONISTS                          | 244     | 289     | 234     | 327     | 293     |
| SECRETARIES                            | 1,355   | 1,341   | 847     | 1,718   | 1,555   |
| STENOGRAPHERS                          | 26      | - 33    | 64      | 18      | 17      |
| TYPISTS                                | 397     | 321     | 609     | 475     | 466     |
| SERVICE CLERKS                         | 8       | 9       | 23      | 19      | 17      |
| SHIPPING & RECEIVING CLERKS            | 109     | 74      | 283     | 172     | 88      |
| SHIPPING PACKERS                       | 105     | 51      | 251     | 146     | 61      |
| SORTING CLERKS BANKING                 | - 1     | 7       | - 4     | 5       | 2       |
| STATEMENT CLERKS                       | 1       | 35      | - 13    | 23      | 14      |
| STOCK CLERKS STOCKROOM & WAREHOUSE     | 203     | 190     | 626     | 367     | 240     |
| SWITCHBOARD OPERATORS RECEPTIONISTS    | 130     | 141     | 66      | 178     | 138     |
| TELEGRAPH OPERATORS                    | - 1     | 2       | 5       | 3       | 2       |
| TELEPHONE OPERATORS                    | - 64    | 69      | 111     | 80      | 22      |
| SHITCHBOARD OPERATORS                  | 101     | 105     | 60      | 118     | 90      |
| CENTRAL OFFICE OPERATORS               | - 103   | ~ 38    | 24      | - 42    | - 64    |
|  |         |         |         |         |         |



37 TABLE 2

| OCCUPATION   | 1975 | i-78      | 19  | 78-83           | 1983-84      | 1984-85   | 1985-90 |
|--|------|-----------|-----|-----------------|--------------|-----------|---------|
| CRAFT & RELATED WORKERS  |      |           |     |                 |              |           |         |
| CONSTRUCTION CRAFT WORKERS   | -    | 529       |     | 463             | 2,383        | 1,208     | 1,044   |
| INSULATION HORKERS   | _    | 15        |     | 10              | 59           | 27        |         |
| BRICKLAYERS ,  | -    | 42        |     | 18              | 69           | 38        | 33      |
| STONE MASONS   | -    | 2         |     | 1               | 6            | 0         | 0       |
| CARPENTERS   | 600  | 135       |     | 152             | 586          | 343       | 303     |
| CEMENT MASONS & TERRAZZO WORKERS                                     | -    | 50        |     | 24              | 89           | 49        | 44      |
| DRYWALL APPLICATORS AND TAPERS DRYWALL APPLICATORS                   | _    | 38        |     | 18              | 61           | 35        | 31      |
| TAPERS   | _    | 25        |     | 12              | 41           | 23        | 21      |
| ELECTRICIANS   | _    | 13<br>24  |     | 6               | 20           | 12        | 10      |
| FITTERS PIPELAYING   | _    | 4         |     | 6 <b>8</b><br>2 | 552<br>7     | 258<br>4  | 222     |
| FLOOR COVERING INSTALLERS  | _    | 14        |     | 12              | 44           | 29        | 23      |
| GLAZIERS   | _    | . 7       |     | 10              | 34           | 22        | 18      |
| IRONWORKERS  | -    | 52        |     | 20              | 102          | 49        | 43      |
| LATHERS  | -    | 10        | -   | 1               | 5            | 1         | - 1     |
| PAINTERS & PAPERHANGERS  | -    | 29        |     | 62              | 219          | 119       | 108     |
| PAINTERS CONSTRUCTION & MAINTENANCE                                  | _    | 25        |     | 61              | 213          | 115       | 105     |
| PAPERHANGERS PLASTERERS  | -    | .5        |     | 1               | 6            | 3         | 2       |
| PLUMBERS & PIPEFITTERS   | -    | 13        |     | 0               | 11           | 3         | 2       |
| ROOFERS  | _    | 51<br>48  |     | 51<br>15        | 428<br>63    | 180<br>33 | 151     |
| TILE SETTERS   | _    | 8         |     | 4               | 13           | 33<br>8   | 27<br>7 |
| MECHANICS REPAIRERS & INSTALLERS                                     |      | 1,022     |     | 982             | 3,164        | 2,034     | 1,670   |
| AIR CONDITIONING REFRIG. & HEATING MECH.                             | _    | 22        |     | 36              | 148          | 76        | 65      |
| APPLIANCE INSTALLERS & REPAIRERS                                     |      | 4         |     | 7               | 32           | 25        | 15      |
| AUTOMOTIVE BODY REPAIRERS  |      | 62        |     | 31              | ~ 1          | 77        | 53      |
| AUTO SEAT COVER & TOP INSTALLERS                                     |      | 4         |     | 2               | - 4          | 4         | 2       |
| AUTOMOTIVE MECHANICS   |      | 311       |     | 282             | 497          | 527       | 471     |
| COIN MACHINE SERVICERS & REPAIRERS COMMUNICATION EQUIPMENT MECHANICS |      | 8         |     | 6               | 11           | 16        | 12      |
| COMPUTER SERVICE TECHNICIANS   | -    | 86        | -   | 6               | 50           | ~ 5       | - 24    |
| DIESEL MECHANICS   |      | 51<br>45  |     | 93              | 111          | 97        | 94      |
| ELECTRICAL INSTRUMENT & TOOL REPAIRERS                               | *    | 9         |     | 42<br>11        | 60<br>29     | 74<br>12  | 53<br>6 |
| ELECTRIC MOTOR REPAIRERS   |      | 10        |     | 14              | 20           | 23        | 15      |
| LINE INSTALLERS & CABLE SPLICERS                                     |      | 51        |     | 36              | 168          | 62        | 38      |
| ENGINEERING EQUIPMENT MECHANICS                                      | -    | 9         |     | 19              | 81           | 10        | 6       |
| INSTRUMENT REPAIRERS   |      | 25        |     | 10              | 34           | 28        | 21      |
| INDUSTRIAL MACHINERY REPAIRERS                                       |      | 158       |     | 13              | 403          | 194       | 143     |
| MAINTENANCE REPAIRERS GENERAL UTILITY MARINE MECHANICS & REPAIRERS   |      | 305       |     | 252             | 511          | 450       | 384     |
| MILLWRIGHTS & REPAIRERS  |      | 14        | -   | 5               | 33           | 10        | 5       |
| OFFICE MACHINE REPAIRERS   |      | 33<br>30  |     | 6               | 87           | 56        | 42      |
| RADIO & TELEVISION SERVICE TECHNICIANS                               |      | 13        |     | 58<br>18        | 71<br>44     | 51        | 41      |
| TELEPHONE & PBX INSTALLERS & REPAIRERS                               |      |           |     |                 | * *          | 33        | 25      |
| METALWORKING CRAFT WORKERS EXCEPT MECHANICS                          | _    | 79<br>559 | _   | 29<br>17        | 125<br>1,229 | 37<br>589 |         |
| MACHINISTS & LAYOUT MARKERS  |      | 197       |     | 19              | 334          | 191       |         |
| LAYOUT MARKERS METAL   |      | 11        | -   | ó               | 24           | 11        |         |
| MACHINISTS   |      | 173       |     | 20              | 289          | 168       | 119     |
| JOB & DIE SETTERS  |      | 110       | -   | 4               | 174          | 102       | 66      |
| MACHINE TOOL SETTERS METALWORKING                                    |      | 68        |     | 1               | 100          | 55        | 38      |
| PUNCH PRESS SETTERS METAL  |      | 22        |     | 0               | 33           | 21        | 12      |
| SHEETMETAL WORKERS & TINSMITHS TOOLMAKERS & DIEMAKERS                |      | 25        |     | 21              | 305          | 112       | 96      |
| ALL OTHER METALMORKING CRAFT WORKERS                                 |      | 151       | -   | 20              | 251          | 108       | 75      |
| PRINTING TRADES CRAFT WORKERS  |      | 9<br>62   | _   | 3<br>163        | 14           | 11        | 6       |
| TYPESETTERS & COMPOSITORS  |      | 15        |     | 6               | 256<br>15    | - 14      | - 23    |
| LITHOGRAPHERS & PHOTOENGRAVERS                                       |      | 14        |     | 46              | 61           | 23        | 16      |
| CAMERA OPERATORS PRINTING  |      | 6         |     | 16              | 22           | 9         | 7       |
| PHOTOENGRAVERS   | -    | 3         | 440 | 0               | 2            | - 4       | - 4     |
| PLATEMAKERS  |      | 2         |     | 8               | 10           | 3         | 2       |
| STRIPPERS PRINTING   |      | 9         |     | 22              | 27           | 14        | 12      |
| PRINTING PRESS OPERATORS   |      | 42        |     | 79              | 121          | 54        | 33      |
| LETTER PRESS OPERATORS OFFSET LITHOGRAPHIC PRESS OPERATORS           | -    | 4<br>23   |     | 11              | 13           | - 3       | - 5     |
|  |      | 2.5       |     | 63              | 95           | 36        | 28      |
| PRESS OPERATORS & PLATE PRINTERS                                     |      | 23        |     | 0               | 6            | 19        | 9       |



| OCCUPATION                                    | 1975-78 | 19 | 978-83 | 1983-84      | 1984-85      | 19 | 85-90 |
|---|---------|----|--------|--------------|--------------|----|-------|
|   |         |    |        |              |              |    |       |
| OTHER CRAFT & RELATED WORKERS                 | 1,646   |    | 451    | 3,643        | 2,142        |    | 1 407 |
| BAKERS  | 5       |    | 3      | 34           | 25           |    | 1,603 |
| CABINETMAKERS                                 | 12      |    | 1      | 49           | 25           |    | 17    |
| CRANE DERRICK & HOIST OPERATORS               | 18      |    | 1      | 86           | 40           |    | 31    |
| DENTAL LAB TECHNICIANS                        | 39      |    | 17     | 20           | 30           |    | 26    |
| FURNITURE FINISHERS                           | 4       |    | 4      | 10           | 10           |    | 7     |
| FURNITURE UPHOLSTERERS                        | 1       |    | 3      | 5            | 7            |    | 3     |
| HEAVY EQUIPMENT OPERATORS                     | - 89    |    | 45     | 273          | 130          |    | 155   |
| TAILORS                                       | 9       |    | 10     | 41           | 39           |    | 26    |
| UPHOLSTERERS                                  | 2       |    | 4      | 7            | 2            |    | 0     |
| UPHOLSTERY CUTTERS                            | 1       | _  | 2      | 2            | 1            |    | 0     |
| UPHOLSTERY WORKERS NEC                        | 2       | -  | 4      | 5            | 2            |    | 0     |
| OPERATIVES                                    |         |    |        |              |              |    |       |
| ASSEMBLER OCCUPATIONS                         | 2,218   |    | 864    | 7 547        | 1.007        |    |       |
| ASSEMBLERS                                    | 180     | _  | 97     | 3,563<br>292 | -,-,-        |    | 1,158 |
| ELECTRICAL MACHINERY EQUIPMENT ASSEMBLERS     | 257     | _  | 179    | 363          | 204          |    | 94    |
| ELECTRICAL & ELECTRONIC ASSEMBLERS            | 696     |    | 570    |              | 235          |    | 173   |
| INSTRUMENT MAKERS                             | 123     |    | 43     | 1,258<br>116 | 626          |    | 342   |
| MACHINE ASSEMBLERS                            | 174     |    | 7      | 287          | 107          |    | 94    |
| ALL OTHER ASSEMBLERS                          | 515     |    | 102    | 762          | 146          |    | 91    |
| BINDERY OPERATIVES                            | - 5     |    | 30     | 35           | 415          |    | 235   |
| METALWORKING OPERATIVES                       | 1,338   | _  | 175    | 2,378        | - 3          | -  | 16    |
| MACHINE TOOL OPERATORS                        | 966     | _  | 134    | 1,639        | 1,091<br>736 |    | 722   |
| DRILL PRESS & BORILNG MACHINE OPERATORS       | 122     |    | 18     | 199          | 736<br>94    |    | 513   |
| GRINDING & ABRADING MACHINE OPERATOR METAL    | 112     | _  | 39     | 170          | 74           |    | 66    |
| LATHE MACHINE OPERATORS METAL                 | 145     | _  | 41     | 243          | 105          |    | 67    |
| MILLING                                       | 67      | _  | 17     | 121          | 35           |    | 33    |
| MACHINE TOOL OPERATORS COMBINATION            | 189     |    | 1      | 376          | 158          |    | 114   |
| MACHINE TOOL OPERATORS NUMERICAL CONTROL      | 90      |    | 12     | 154          | 71           |    | 61    |
| MACHINE TOOL OPERATORS TOOL ROOM              | 40      | -  | 2      | 66           | 27           |    | 24    |
| PUNCH PRESS OPERATORS METAL                   | 145     | -  | 25     | 210          | 125          |    | 71    |
| POWER BRAKE BENDING MACHINE OPERATORS METAL   | 36      | -  | 2      | 65           | 30           |    | 22    |
| SHEAR & SLITTER OPERATORS METAL               | 17      | -  | 1      | 30           | 16           |    | 10    |
| WELDERS & FLAMECUTTERS                        | 287     | -  | 41     | 598          | 283          |    | 175   |
| PAINTERS AUTOMOTIVE                           | 23      |    | 13     | - 8          | 28           |    | 20    |
| PAINTERS PRODUCTION SEWERS & STITCHERS        | 104     | -  | 20     | 171          | 76           |    | 46    |
| SEWING MACHINE OPRS. REGULAR EQUIP. GARMENT   | 1       | -  | 502    | 127          | 135          | _  | 116   |
| SEWING MACHINE OPRS. SPECIAL EQUIP. GARMENT   | - 66    | -  | 330    | 68           | 81           | _  | 92    |
| SEWING MACHINE OPRS. REGULAR EQUIP. NONGARMEN | - 8     | -  | 46     | 12           | 15           | -  | 12    |
| SEWING MACHINE OPRS. SPECIAL EQUIP. NONGARMEN | 62      | -  | 78     | 38           | 30           | _  | 6     |
| ALL OTHER SEWERS & STITCHERS                  | 13      | -  | 32     | 8            | 6            | _  | 4     |
| AMBULANCE DRIVERS & AMBULANCE ATTENDANTS      | - 1     | -  | 19     | - 5          | - 3          |    | 7     |
| BUSDRIVERS                                    | 17      |    | 9      | 35           | 20           |    | 25    |
| MISC. MACHINE OPERATIVES LUMBER & FURNITURE   | 267     |    | 52     | 514          | 269          |    | 412   |
| PHOTOGRAPHIC PROCESS WORKERS                  | 20      | -  | 5      | 32           | 16           |    | 9     |
| RIVETERS                                      | 68      |    | 48     | 18           | 57           |    | 28    |
| ROTARY DRILL OPERATORS                        | 19      | -  | 3      | 30           | 7            |    | 7     |
| ROTARY DRILL OPERATOR HELPERS                 | 0       |    | 1      | 3            | 0            |    | 0     |
| SANDBLASTERS & SHOTBLASTERS                   | - 0     |    | 1      | 0            | - 1          | -  | 1     |
| SANDERS WOOD                                  | 7       | -  | 2      | 16           | 6            |    | 4     |
| TIRE CHANGERS & REPAIRERS                     | 6       | -  | 4      | 10           | 6            |    | 2     |
| WOOD MACHINISTS                               | 19      |    | 20     | 55           | 47           |    | 39    |
|   | 8       |    | 2      | 15           | 11           |    | 8     |



TABLE 2

| OCCUPATION                                 | 1975-78             | 1978-83        | 1983-84      | 1984-85        | 1985-90   |
|--|---------------------|----------------|--------------|----------------|-----------|
|  |                     |                |              |                |           |
| SERVICE WORKERS                            | 9,622               | 7,461          | 3,496        | 8,747          | 9,068     |
| BUILDILING CUSTODIANS                      | 7 (05               | 7 (00          | 070          |                |           |
| FOOD SERVICE WORKERS                       | 1,625<br>4,455      | 1,490<br>3,436 | 978<br>1,780 | 1,959<br>2,776 | 1,851     |
| BUTCHERS & MEAT CUTTERS                    | - 39                | - 31           | 66           | 15             | - 17      |
| COOKS & CHEFS                              | 860                 | 635            | 380          | 606            | 739       |
| COOKS INSTITUTIONAL                        | 231                 | 140            | 143          | 270            | 392       |
| COOKS RESTAURANT                           | 292                 | 251            | 113          | 186            | 197       |
| COOKS SHORT ORDER & SPECIALTY FAST FOODS   | 337                 | 243            | 123          | 147            | 149       |
| FOOD PREP. & SERVICE WKRS. FAST FOOD REST. | 694                 | 510            | 280          | 293            | 304       |
| HOSTS                                      | 95                  | 77             | 31           | 49             | 52        |
| KITCHEN HELPERS                            | 620                 | 474            | 262          | 493            | 568       |
| WAITERS & WAITRESSES                       | 1,328               | 1,035          | 380          | 686            | 706       |
| ALL OTHER FOOD SERVICE WORKERS             | 319                 | 265            | 309          | 282            | 295       |
| SELECTED HEALTH SERVICE WORKERS            |                     |                |              |                |           |
| DENTAL ASSISTANTS                          |                     |                |              |                |           |
| HEALTH AIDES EXCEPT NURSING                | 81                  | 85             | 191          | 60             | 65        |
| MEDICAL ASSISTANTS                         | 6                   | 6              | 8            | 8              | 7         |
| NURSING AIDES ORDERLIES & ATTENDANTS       | 61                  | 60             | 110          | 54             | 59        |
| PHARMACY HELPERS                           | 896                 | 661            | 530          | 991            | 935       |
| PSYCHIATRIC AIDES                          | 15<br>65            | 19<br>88       | 28<br>74     | 25<br>106      | 21<br>90  |
| SELECTED PERSONAL SERVICE WORKERS          |                     |                |              |                |           |
| BARBERS                                    |                     |                |              |                |           |
| CHILD CARE ATTENDANTS                      | 11                  | 21             | 25           | 35             | 23        |
| CHILD CARE WORKERS                         | 16                  | 19             | - 52         | 25             | 18        |
| COSMETOLOGISTS                             | 126                 | 148            | - 376        | 186            | 159       |
| COSMETOLOGISTSWOMEN'S HAIRSTYLISTS         | 52<br>48            | 130            | 156          | 240            | 133       |
| MANICURISTS                                | 2                   | 119            | 144          | 221            | 123       |
| SHAMPOOERS & SCALP TREATMENT OPERATORS     | 2                   | 6              | 5            | 8              | 4         |
| HOUSEKEEPERS HOTEL & MOTEL                 | 48                  | 54             | 7            | 12             | 6         |
| WELFARE SERVICE AIDES                      | <del>40</del><br>52 | 43             | 10<br>- 62   | 62             | 61        |
| GARDENERS & GROUNDSKEEPERS EXCEPT FARM     | 154                 | 106            | - 62         | 70<br>177      | 78<br>190 |
| LABORERS EXCEPT FARM                       |                     |                |              |                |           |
| 1151 7770 77100                            |                     |                |              |                |           |
| HELPERS TRADES                             | - 105               | 100            | 522          | 320            | 262       |
| STOCK HANDLERS                             | 67                  | 137            | 622          | 386            | 224       |
| ORDER FILLERS                              | 44                  | 119            | 235          | 117            | 45        |
| STOCK CLERK SALES FLOOR                    | 23                  | 18             | 386          | 269            | 179       |
| TOTAL ALL OCCUPATIONS                      | 43,859              | 32,641         | 65,815       | 57,952         | 51,732    |

SOURCE: BRA RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC.. NOVEMBER 13, 1985.



TABLE 3

EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990

BOSTON METROPOLITAN AREA\*

AVERAGE ANNUAL PERCENT CHANGE IN NUMBER OF EMPLOYEES

| OCCUPATION                                 |         |            |                |            |         |
|--|---------|------------|----------------|------------|---------|
| occor #1100                                | 1975-78 | 1978-83    | 1983-84        | 1984-85    | 1985-90 |
| PROFESSIONAL, TECHNICAL & RELATED WORKERS  |         |            |                |            |         |
| ENGINEERING & SCIENCE TECHNICIANS          |         |            |                |            |         |
|  |         |            |                |            |         |
| BROADCAST TECHNICIANS DRAFTERS             | 0,6     | 1.7        | 8.0            | 3.2        | 1.9     |
| ELECTRICAL & ELECTRONIC TECHNICIANS        | 3.4     | 1.3        | 0.5            |            |         |
| MEDICAL MORKERS EXCEPT TECHNICIANS         | 6.5     |            | 8.4            | 4.9        |         |
| HEALTH TECHNOLOGISTS & TECHNICIANS         | 3.9     |            |                | 3.8        |         |
| CLINICAL LABORATORY TECHNOLOGISTS & TECH.  | 3.7     | 2.0        | 4.7            | 3.5        |         |
| BIOCHEMISTRY TECHNOLOGIST                  | 3.4     |            | 4.0            | 3.5        | 3.1     |
| BLOOD BANK TECHNOLOGY SPECIALISTS          | 3.2     |            |                | 3.6        | 3.1     |
| MEDICAL LABORATORY TECHNICIANS             | 4.0     |            |                | 4.3        | 3.7     |
| MEDICAL LABORATORY TECHNOLOGISTS           | 2.5     | 2.5        | 2.4            | 2.4        | 1.9     |
| DENTAL HYGIENISTS                          | 3.8     | 2.,        |                | 3.8        | 3.6     |
| DIETETIC TECHNICIANS                       | 4.7     |            |                | 2.4        | 2.5     |
| HEALTH RECORD TECHNICIANS                  | 4.8     |            |                | 4.3        |         |
| PHYSICAL THERAPY ASSISTANTS                | 2.0     | 3.5        | 4.9            | 3.7        | 3.4     |
| PHYSICIAN ASSISTANTS                       | 2.2     | 4.8        | 4.6<br>5.0     | 4.5        | 4.3     |
|  | 5. + 5. | 1.0        | 5.0            | 1.6        | 1.7     |
| OTHER PROFESSIONAL & TECHNICAL WORKERS     |         |            |                |            |         |
| TOOL PROGRAMMERS NUMERICAL CONTROL         | 10.7    | 4.0        |                |            |         |
| COMPUTER PROGRAMMERS                       | 7.7     | 7.2        | 11.6           | 5.9        | 5.9     |
| COMPUTER SYSTEMS ANALYSTS                  | 8.1     |            | 5.4            |            |         |
| VOCATIONAL EDUCATION TEACHERS              | 5.0     | 7.4<br>3.1 | 7.4            | 0.0        | 2.0     |
| COMMERCIAL & GRAPHIC ARTISTS & DESIGNERS   | 5.0     |            | 2.7            |            | ٠.,     |
| PHOTOGRAPHERS                              | 2.1     |            | 4.6            |            |         |
| RADIO & TV ANNOUNCERS & NEWSCASTERS        | 0.0     |            | 3.4            |            | /       |
| BUYERS RETAIL & WHOLESALE TRADE            | 0.8     | 24.17      | 2.1<br>4.0     | 3.7        | 1.8     |
| CURRICULUM SPECIALISTS                     | 2.0     | 0.3        |                | 2.0        |         |
| LAW CLERKS                                 |         |            |                | 1.7        | 3.0     |
| LAWYERS                                    | 5.8     | 4.8        | - 0.1<br>- 0.1 | 3.6<br>4.6 |         |
| LEGAL ASSISTANTS                           | 8.4     | 7.5        | 0.6            | 6.6        |         |
| MANAGERS, OFFICIALS & PROPRIETORS          |         |            |                | 3.0        | 7.0     |
|  |         |            |                |            |         |
| RESTAURANT CAFE & BAR MANAGERS             | 5.2     | 3.3        | 2.0            | 2.0        | 2.2     |
| SALES MANAGERS RETAIL TRADE STORE MANAGERS | 0.6     | 2.7        |                | 2.2        |         |
| WHOLESALERS                                | 1.3     | 1.3        | 4.3            | 3.3        | 1.4     |
| MIOLESALERS                                | 0.0     | 3.9        | 3.5            | 1.4        | 0.5     |
| SALES WORKERS                              |         |            |                |            | 0.3     |
| # - · · · · · · · · · · · · · · · · · ·    | 1.3     | 1.9        | 3.3            | 2.9        | 2.0     |
| SALES CLERKS                               | 0.8     | 0.0        |                |            |         |
| ALL OTHER SALES WORKERS                    | 3.6     | 0.8        | 3.4            |            | ~       |
|  | ٥.٥     | 2.4        | 3.6            | 4.0        | 2.8     |



#### EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990 BOSTON METROPOLITAN AREA\*

| AVERAGE ANNUAL PERCENT CH. | NGE IN NUMBER OF EMPLOYEES |
|----------------------------|----------------------------|
|----------------------------|----------------------------|

| OCCUPATION                                   | 1975-78        | 1978-83 | 1987-84      | 1984-85      | 1985-90      |
|--|----------------|---------|--------------|--------------|--------------|
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~      |                |         |              | 1704-05      | 1703-70      |
|  |                |         |              |              |              |
| CLERICAL WORKERS                             | 2.3            | 2.3     | 3.2          | 2.7          | 2.3          |
| BANK TELLERS                                 |                |         |              |              |              |
| ACCOUNTING CLERKS                            | 0.9            | 5.5     | - 1.3        | 3.0          | 1.7          |
| BOOKKEEPERSHAND                              | 1.9            | 1.7     | 2.6          | 2.3          | 1.5          |
| CAR RENTAL CLERKS                            | 1.4            | 1.7     | 1.3          |              | 1.3          |
| CASHIERS                                     | 5.2            |         | - 5.1        |              | 2.0          |
| CHECKING CLERKS                              | 2.6            |         | 4.2          |              | 3.4          |
| CIRCULATION CLERKS                           | - 0.1          |         | - 1.8        | 2.5          | 1.3          |
| CLAIMS CLERKS                                | 0.4<br>3.8     | 2.4     | 2.2          | 1.1          | 0.6          |
| FILE CLERKS                                  | 1.9            |         | 4.8          | 3.9          | 3.4          |
| GENERAL CLERKS OFFICE                        | 2.2            |         |              | 1.8          | 1.2          |
| INSURANCE CLERKS EXCEPT MEDICAL              | 3.0            |         | 3.3<br>- 0.4 | 2.9          | 2.5          |
| INSURANCE CLERKS MEDICAL                     | 4.9            | 5.2     |              | 3.7          | 2.7          |
| LIBRARY ASSISTANTS                           | 2.2            | 0.8     |              | 4.2          | 4.0          |
| LICENSE CLERKS                               | 0.7            |         | 1.5          | 2.0          | 3.7          |
| MAIL CARRIERS & POSTAL CLERKS                | 0.4            | - 2.0   |              | 0.7<br>- 1.5 | 2.2          |
| METER READERS UTILITIES                      | 0.8            |         | 1.9          | 1.7          | - 0.7<br>0.7 |
| MORTGAGE CLOSING CLERKS                      | 3.5            | 7.4     | 0.3          | 5.0          | 3.2          |
| OFFICE MACHINE OPERATORS                     | 3.1            | 3.2     | 2.0          | 3.0          | 2.3          |
| BOOKKEEPING BILLING MACHINE OPERATORS        | 1.6            | 2.7     | 1.9          | 2.6          | 1.8          |
| PROOF MACHINE OPERATORS                      | - 0.4          | 4.7     | - 2.0        | 2.3          | 1.2          |
| TRANSIT CLERKS                               | - 0.4          | 4.5     | - 2.1        | 2.2          | 1.1          |
| COMPUTER OPERATORS                           | 7.2            |         | 5.3          | 6.0          | 5.6          |
| DATA ENTRY OPERATORS                         | 1.7            | 0.8     | 0.2          | 0.7          |              |
| PERIPHERAL EDP EQUIPMENT OPERATORS           | 6.7            | 6.7     | 3.4          | 5.5          | 4.6          |
| DUPLICATING MACHINE OPERATORS                | 3.4            | 2.4     | 0.8          | 2.5          | 2,0          |
| ALL OTHER OFFICE MACHINE OPERATORS           | 3.9            | 3.6     | 2.3          | 3.5          | 3.0          |
| ORDER CLERKS                                 | 1.7            | 2.3     | 3.6          | 2.5          | 1.4          |
| PAYROLL & TIMEKEEPING CLERKS                 | 2.8            | 2.0     | 4.4          | 3.6          | 2.9          |
| PERSONNEL CLERKS                             | 3.3            | 1.8     | 8.5          | 2.9          | 2.5          |
| POLICY CHANGE CLERKS PROCUREMENT CLERKS      | 1.3            | 1.7     | - 2.5        | 2.1          | 1.1          |
| PRODUCTION CLERKS                            | 4.1            | 1.5     | 9.2          | 3.1          | 2.5          |
| RATE CLERKS FREIGHT                          | 5.0            | 2.2     | 7.4          | 3.4          | 2.6          |
| REAL ESTATE CLERKS                           | 2.4            | - 1.9   | 0.7          | 2.9          | 1.4          |
| RECEPTIONISTS                                | 2.9            | 4.4     | 13.6         | 4.2          | 2.4          |
|  | 4.4            | 4.6     | 3.0          | 4.1          | 3.5          |
| SECRETARIES                                  | 3.3            | 2.9     | 1.6          | 3.2          | 2.8          |
| STENOGRAPHERS TYPISTS                        | 0.4            | - 0.5   | 1.1          | 0.3          | 0.3          |
| SERVICE CLERKS                               | 2.0            | 1.5     | 2.7          | 2.1          | 2.0          |
|  | 2.0            | 2.1     | 4.8          | 3.8          |              |
| SHIPPING & RECEIVING CLERKS SHIPPING PACKERS | 1.6            | 1.1     | 3.8          | 2.2          | 1.1          |
| SORTING CLERKS BANKING                       | 1.8            | 0.8     | 3.8          | 2.1          | 0.9          |
| STATEMENT CLERKS                             | - 0.4          | 4.8     | - 2.1        | 2.7          | 1.3          |
| STOCK CLERKS STOCKROOM & WAREHOUSE           | 0.1            | 5.2     | - 1.5        | 2.8          | 1.6          |
| SWITCHBOARD OPERATORS RECEPTIONISTS          | 1.3            | 1.2     | 3.6          | 2.1          | 1.3          |
| TELEGRAPH OPERATORS                          | 3.7            | 3.6     | 1.4          | 3.8          | 2.9          |
| TELEPHONE OPERATORS                          | - 1.4          | 2.0     | 5.1          | 2.9          | 1.5          |
| SWITCHBOARD OPERATORS                        | - 0.9          | 1.0     | 1.6          | 1.1          | 0.3          |
| CENTRAL OFFICE OPERATORS                     | 3.3            | 3.1     | 1.5          | 3.0          | 2.2          |
| DIRECTORY ASSISTANCE OPERATORS               | - 3.6<br>- 3.2 | - 1.5   | 1.0          | - 1.8        | - 2.8        |
|  | 3.2            | 0.3     | 3.1          | 0.5          | - 0.4        |



#### EMPLOYMENT BY SELECTED OCCUPATION FOR SELECTED YEARS, 1975-1990 BOSTON METROPOLITAN AREA\*

| AVERAGE ANNUAL PERCENT CHANGE IN NUMBER OF EMPLOYE | FES | 2 |
|--|-----|---|
|--|-----|---|

| OCCUPATION                                  | ]     | 1975-78    |   | 1978-83    | 1983-84 | 1984-85 | 1985-90 |
|---|-------|------------|---|------------|---------|---------|---------|
| CRAFT & RELATED WORKERS                     |       |            |   |            |         |         |         |
| CONSTRUCTION CRAFT WORKERS                  |       |            |   |            |         |         |         |
| INSULATION WORKERS                          |       | 1.7        |   | 1.6        |         | 3.5     | 2.9     |
| BRICKLAYERS                                 |       | 2.4        |   | 1.7        | 9.2     | 3.9     | 3.1     |
| STONE MASONS                                |       | 4.0        |   | 2.0        | 6.8     | 3.5     | 3.0     |
| CARPENTERS                                  |       |            |   | 1.1        | 11.1    | 0.0     | 0.0     |
| CEMENT MASONS & TERRAZZO WORKERS            |       | 1.7        |   | 2.0        | 6.9     | 3.8     | 3.2     |
| DRYHALL APPLICATORS AND TAPERS              |       | 4.1        |   | 2.3        | 7.5     | 3.8     | 3.3     |
| DRYWALL APPLICATORS                         |       | 4.5        |   | 2.4        | 7.5     | 4.0     | 3.4     |
| TAPERS                                      |       |            |   | 2.5        | 7.5     | 3.9     | 3.4     |
| ELECTRICIANS                                |       | 0.4        |   | 2.4        | 7.4     | 4.1     | 3.3     |
| FITTERS PIPELAYING                          |       | 4.5        |   | 1.0        | 7.7     | 3.4     | 2.8     |
| FLOOR COVERING INSTALLERS                   |       | 1.8        |   | 2.7        | 7.4     | 4.0     | 3.4     |
| GLAZIERS                                    |       | 1.2        |   |            | 5.6     | 3.5     | 2.7     |
| IRONHORKERS                                 |       | 3.8        |   | 1.8<br>1.7 | 5.6     | 3.4     | 2.7     |
| LATHERS                                     |       | 6.7        |   | 0.8        | 7.7     | 3.4     |         |
| PAINTERS & PAPERHANGERS                     |       | 1.0        | _ |            | 4.3     | 0.8     |         |
| PAINTERS CONSTRUCTION & MAINTENANCE         |       | 0.8        |   | 2.1        | 6.6     | 3.4     | 3.0     |
| PAPERHANGERS                                |       | 5.2        |   | 2.1        | 6.6     | 3.4     |         |
| PLASTERERS                                  |       | 6.0        |   | 1.5        | 6.9     | 3.2     | 2.5     |
| PLUMBERS & PIPEFITTERS                      |       | 1.1        |   | 0.2        | 5.9     | 1.5     | 0.9     |
| ROOFERS                                     |       | 4.9        |   | 1.1        | 8.9     | 3.4     | 2.8     |
| TILE SETTERS                                |       | 4.1        |   | 1.8        | 6.9     | 3.4     | 2.6     |
| MECHANICS REPAIRERS & INSTALLERS            | _     | 1.8        |   | 2.3        | 6.7     | 3.9     | 3.2     |
| AIR CONDITIONING REFRIG. & HEATING MECH.    |       | 1.1        |   | 1.6        | 4.9     | 3.0     | 2.4     |
| APPLIANCE INSTALLERS & REPAIRERS            | _     | 0.4        |   | 1.8        | 6.7     | 3.2     | 2.7     |
| AUTOMOTIVE BODY REPAIRERS                   |       | 3.5        |   | 0.7        | 3.1     | 2.4     | 1.4     |
| AUTO SEAT COVER & TOP INSTALLERS            |       | 5.9        |   | 1.6        | - 0.0   | 3.7     | 2.5     |
| AUTOMOTIVE MECHANICS                        |       |            |   |            | - 4.5   | 4.7     | 2.7     |
| COIN MACHINE SERVICERS & REPAIRERS          |       | 3.0<br>1.8 |   | 2.5        | 3.9     | 4.0     | 3.4     |
| COMMUNICATION EQUIPMENT MECHANICS           |       | 3.7        |   | 1.3        | 2.2     | 3.1     |         |
| COMPUTER SERVICE TECHNICIANS                | _     |            |   | 0.3        | 2.5     |         |         |
| DIESEL MECHANICS                            |       | 1.7        |   | 11.3       | 8.6     | 6.9     | 6.3     |
| ELECTRICAL INSTRUMENT & TOOL REPAIRERS      |       | 5.1        |   | 5.2        | 2.0     | 2.4     | 1.7     |
| ELECTRIC MOTOR REPAIRERS                    |       | 3.9        |   | 4.6        | 11.3    | 4.2     | 2.1     |
| LINE INSTALLERS & CABLE SPLICERS            | _     | 1.5        |   | 1.1        | 5.5     | 6.0     | 3.8     |
| ENGINEERING EQUIPMENT MECHANICS             |       | 0.8        |   | 1.6        | 4.9     | 1.7     | 1.0     |
| INSTRUMENT REPAIRERS                        |       | 4.1        |   | 1.4        | 6.5     | 0.7     | 0.4     |
| INDUSTRIAL MACHINERY REPAIRERS              |       | 3.4        |   | 0.3        | 4.7     | 3.7     | 2.7     |
| MAINTENANCE REPAIRERS GENERAL UTILITY       |       | 2.7        |   | 2.1        | 7.8     | 3.5     | 2.5     |
| MARINE MECHANICS & REPAIRERS                |       | 7.2        |   |            | 3.8     | 3.2     | 2.7     |
| MILLWRIGHTS                                 |       | 3.2        | _ | 2.0<br>0.5 | 15.5    | 4.1     | 1.8     |
| OFFICE MACHINE REPAIRERS                    |       | 4.4        |   |            | 7.5     | 4.5     | 3.2     |
| RADIO & TELEVISION SERVICE TECHNICIANS      |       |            |   | 7.5        | 6.6     | 4.5     | 3.5     |
| TELEPHONE & PBX INSTALLERS & REPAIRERS      |       | 1.5        |   | 2.0        | 4.4     | 3.2     | 2.4     |
| METALWORKING CRAFT WORKERS EXCEPT MECHANICS | -     |            |   | 1.0        | 4.2     | 1.2     | 0.4     |
| MACHINISTS & LAYOUT MARKERS                 |       | 4.4        | - |            | 8.6     | 3.8     | 2.6     |
| LAYOUT MARKERS METAL                        |       | 5.1        |   | 0.4        | 7.4     | 3.9     | 2.7     |
| MACHINISTS                                  |       | 4.5        | - | 0.1        | 8.6     | 3.6     | 2.2     |
| JOB & DIE SETTERS                           |       | 5.1        |   | 0.5        | 7.1     | 3.9     | 2.6     |
| MACHINE TOOL SETTERS METALWORKING           |       | 6.9        | _ | 0.2        | 9.1     | 4.9     | 3.0     |
| PUNCH PRESS SETTERS METAL                   |       | 7.3        |   | 0.1        | 8.8     | 4.5     | 3.0     |
| SHEETMETAL WORKERS & TINSMITHS              |       | 6.8        |   | 0.0        | 8.6     | 5.0     | 2.8     |
| TOOLMAKERS & DIEMAKERS                      |       | 0.9        |   | 0.7        | 9.9     | 3.3     | 2.7     |
| ALL OTHER METALWORKING CRAFT WORKERS        |       | 6.2        |   | 0.7        | 8.9     | 3.5     | 2.4     |
| PRINTING TRADES CRAFT HORKERS               |       | 6.0        | - |            | 8.6     | 6.3     | 3.4     |
| TYPESETTERS & COMPOSITORS                   |       | 0.7        |   | 1.9        | 2.7     | 0.9     | 0.4     |
| LITHOGRAPHERS & PHOTOENGRAVERS              | -     | 0.7        |   | 0.3        |         | - 0.7   | - 1.1   |
| CAMERA OPERATORS PRINTING                   |       | 1.0        |   | 3.0        | 3.5     | 1.3     | 0.9     |
| PHOTOENGRAVERS                              |       | 1.3        |   | 3.3        | 3.9     | 1.5     | 1.1     |
| PLATEMAKERS                                 | _     | 1.6        | - | 0.2        | 1.1     | - 2.2   | - 2.3   |
| STRIPPERS PRINTING                          |       | 0.7        |   | 2.7        | 3.0     | 0.9     | 0.6     |
| PRINTING PRESS OPERATORS                    |       | 1.8        |   | 4.1        | 4.1     | 2.0     | 1.7     |
| LETTER PRESS OPERATORS                      |       | 1.1        |   | 2.1        | 2.9     | 1.3     | 0.8     |
| OFFSET LITHOGRAPHIC PRESS OPERATORS         | na na | 0.5        |   | 1.4        | 1.6     | - 0.4   | - 0.6   |
| PRESS OPERATORS & PLATE PRINTERS            |       | 1.2        |   | 3.3        | 4.2     | 1.5     | 1.2     |
| ALL OTHER PRESS & PLATE PRINTERS            |       | 2.9        | - | 0.0        | 0.7     | 2.2     | 1.0     |
| ALL UINER PRESS & DIATE DETRIFEDO           |       |            |   | 2.3        | 2.7     | 0.4     | 0.2     |



| OCCUPATION                                    | 1975-78 |   | 78-83 | 1983-84     |            |   | 85-90 |
|---|---------|---|-------|-------------|------------|---|-------|
| OTHER CRAFT & RELATED WORKERS                 |         |   |       |             |            |   |       |
| BAKERS  | 3.1     |   |       | 6.0         | 3.4        |   | 2.4   |
|   | 0.5     |   | 0.3   | 3.2         | 2.2        |   | 1.5   |
| CABINETMAKERS                                 | 1.7     |   | 0.1   |             |            |   | 2.0   |
| CRANE DERRICK & HOIST OPERATORS               | 1.7     |   | 0.1   | 7.5         | 3.3        |   | 2.4   |
| DENTAL LAB TECHNICIANS                        | 4.8     |   | 1.8   | 2.0         | 2.9        |   | 2.4   |
| FURNITURE FINISHERS                           | 2.2     |   | 2.0   | 5.1         | 4.9        |   | 3.1   |
| FURNITURE UPHOLSTERERS                        | 0.5     |   | 1.7   | 2.3         | 3.1        |   | 1.5   |
| HEAVY EQUIPMENT OPERATORS                     | - 1.8   |   | 1.0   | 5.7         |            |   | 3.0   |
| TAILORS                                       | 0.9     |   | 0.9   |             |            |   | 2.1   |
| UPHOLSTERERS                                  |         | - | 3.3   | 6 9         | 3.3        |   | 0.2   |
| UPHOLSTERY CUTTERS                            |         |   |       |             |            |   | 0.0   |
| UPHOLSTERY HORKERS NEC                        | 2.0     |   | 3.4   | 5.1<br>5.7  | 2.2        |   | 0.0   |
| OPERATIVES                                    |         |   |       |             |            |   |       |
| ASSEMBLER OCCUPATIONS                         |         |   | 2 2   |             |            |   |       |
| ASSEMBLERS                                    |         |   |       | 8.3         |            |   |       |
| ELECTRICAL MACHINERY EQUIPMENT ASSEMBLERS     | 4.2     |   | 2.0   |             |            |   | 2.0   |
| ELECTRICAL & ELECTRONIC ASSEMBLERS            | 7.9     |   | 4.4   | 7.4         |            |   | 3.1   |
| INSTRUMENT MAKERS                             | 6.9     |   | 4.7   | 8.4         | 3.8        |   | 2.0   |
|   |         |   | 2.8   | 6.8         | 5.8        |   | 4.8   |
| MACHINE ASSEMBLERS                            | 6.7     |   | 0.2   | 9.1<br>9.1  | 4.2<br>4.5 |   | 2.5   |
| ALL OTHER ASSEMBLERS                          | 8.2     |   | 1.3   | 9.1         | 4.5        |   | 2.5   |
| BINDERY OPERATIVES                            | - 0.2   |   | 1.4   | 1.6         | - 0.1      | _ | 0.7   |
| METALWORKING OPERATIVES                       | 5.9     | - | 0.7   | 9.2         | 3.9        |   | 2.5   |
| MACHINE TOOL OPERATORS                        | 6.2     | - | 0.7   | 9.2         | 3.8        |   | 2.5   |
| DRILL PRESS & BORILNG MACHINE OPERATORS       | 6.2     |   | 0.8   | 8.8         | 3.8        |   | 2.6   |
| GRINDING & ABRADING MACHINE OPERATOR METAL    | 5.6     |   | 1.7   | 8.0         | 3.2        |   | 1.9   |
| LATHE MACHINE OPERATORS METAL                 | 5.5     |   | 1.3   | 8.5         |            |   | 2.1   |
| MILLING                                       | 5.6     |   | 1.2   | 0.5         | 3.4        |   |       |
| MACHINE TOOL OPERATORS COMBINATION            | 6.8     |   | 0.0   | 9.3<br>11.2 | 2.5        |   | 2.2   |
| MACHINE TOOL OPERATORS NUMERICAL CONTROL      |         |   |       | 11.2        | 4.2        |   | 2.9   |
| MACHINE TOOL OPERATORS TOOL ROOM              | 7.5     |   | 8.0   | 10.1        |            |   | 3.5   |
| PUNCH PRESS OPERATORS METAL                   | 7.1     |   | 0.2   | 9.7         | 3.6        |   | 3.1   |
| POWER BRAKE BENDING MACHINE OPERATORS METAL   | 6.5     |   | 1.0   | 8.3         | 4.5        |   | 2.5   |
| CUEAR & CLATTER OPERATORS METAL               |         | - |       | 9.0         | 3.8        |   | 2.7   |
| SHEAR & SLITTER OPERATORS METAL               | 5.5     | - | 0.3   | 8.3         | 4.1        |   | 2.5   |
| WELDERS & FLAMECUTTERS                        | 4.9     | - | 0.6   | 9.2         | 4.0        |   | 2.4   |
| PAINTERS AUTOMOTIVE                           | 4.8     |   | 2.4   | - 1.3       | 4.7        |   | 3.1   |
| PAINTERS PRODUCTION                           | 6.6     | _ | 1.1   | 9.6         | 3.9        |   | 2.3   |
| SEWERS & STITCHERS                            | 0.0     | - | 3.5   | 1.1         |            | _ | 1.0   |
| SEHING MACHINE OPRS. REGULAR EQUIP. GARMENT   | - 0.7   |   | 3.7   | 0.9         |            | _ |       |
| SEHING MACHINE OPRS. SPECIAL EQUIP. GARMENT   | - 0.7   |   | 3.6   | 1.1         |            |   |       |
| SEWING MACHINE OPRS. REGULAR EQUIP. NONGARMEN | 2.5     |   |       |             |            | - | 1.1   |
| SEWING MACHINE OPRS. SPECIAL EQUIP. NONGARMEN | 2.5     | - | 2.9   | 1.7         |            | - |       |
| ALL OTHER SEWERS & STITCHERS                  |         |   |       | 1.0         |            | - |       |
| AMBULANCE DRIVERS & AMBULANCE ATTENDANTS      | - 0.3   | - | 5.0   | - 1.8       |            |   | 2.4   |
| BUSDRIVERS & AMBULANCE ATTENDANTS             | 3.0     |   | 1.3   | 5.1         | 2.8        |   | 3.3   |
|   | 2.5     |   | 0.5   | 4.4         | 2.2        |   | 3.3   |
| MISC. MACHINE OPERATIVES LUMBER & FURNITURE   | 6.7     | - | 1.5   | 9.4         | 4.3        |   | 2.3   |
| PHOTOGRAPHIC PROCESS WORKERS                  | 5.6     |   | 3.4   | 1.1         | 3.4        |   | 1.6   |
| RIVETERS                                      | 6.1     |   | 0.8   | 8.4         | 1.8        |   | 1.8   |
| ROTARY DRILL OPERATORS                        | 0.0     |   | 2.9   | 12.5        | 0.0        |   | 0.7   |
| ROTARY DRILL OPERATOR HELPERS                 | - 2.1   |   | 6.7   | 0.0         | - 5.0      |   | 3.2   |
| SANDBLASTERS & SHOTBLASTERS                   | 5.6     |   | 1.6   | 12.5        | 4.2        |   | 2.8   |
| SANDERS WOOD                                  | 4.3     | _ | 2.3   | 7.2         | 4.0        |   | 1.4   |
| TIRE CHANGERS & REPAIRERS                     | 1.8     |   | 1.9   | 4.7         | 3.8        |   |       |
| WOOD MACHINISTS                               | 3.5     |   | 0.7   |             |            |   | 3.1   |
|   | 2.5     |   | 0.7   | 6.0         | 4.2        |   | 2.8   |



| OCCUPATION  |              | 1978-83    | 1983-84                         | 1984-85    | 1985-90 |
|---|--------------|------------|---------------------------------|------------|---------|
|   |              |            |                                 |            |         |
| SERVICE WORKERS   | 3.6          | 2 5        | 1.1                             | 2.4        |         |
| *** *** *** *** *** *** *** *** *** **  | 3.0          | 6.5        | 1.1                             | ۷.5        | 2.6     |
| BUILDILNG CUSTODIANS  | 3.3          | 2.7        | 1.6                             | 3.1        | 2.9     |
| FOOD SERVICE WORKERS  | 4.5          | 3.0        | 1.4                             | 2 1        | 2.2     |
| BUTCHERS & MEAT CUTTERS   | - 1.0        | - 0.8      | 1.9                             | 0.4        | - 0.5   |
| COOKS & CHEFS   | - 1.0<br>4.4 | 2.9        | 1.5                             | 2.4        | 2.8     |
| COOKS INSTITUTIONAL   | 2 9          | 1 4        | 7 5                             | 0.0        |         |
| COOKS RESTAURANT  | 5.8          | 4.3        | 1.6                             |            |         |
| COOKS SHORT ORDER & SPECIALTY FAST FOODS  | 5.1          | 3.2        | 1.4                             | 1.7        | 1.6     |
| FOOD PREP. & SERVICE WKRS. FAST FOOD REST.  | 5.5          | 3.5        | 1.4<br>1.6<br>1.3               | 1.7        | 1.7     |
| HOSTS   | 5.4          | 3.7        | 1.3                             | 2.0        | 2.1     |
| KITCHEN HELPERS   | 4.2          | 2.8        | 1.4                             | 2.6        | 2.9     |
| WAITERS & WAITRESSES  | 5.1          | 3.5        | 1.1                             | 1.9        | 2.0     |
| ALL OTHER FOOD SERVICE WORKERS  | 3.4          | 2.6        | 1.4<br>1.1<br>2.6               | 2.3        | 2.4     |
| SELECTED HEALTH SERVICE HORKERS   |              |            |                                 |            |         |
| DENTAL ASSISTANTS   | ·            |            |                                 |            |         |
| HEALTH AIDES EXCEPT NURSING   | 4.7          | 4.3        | 8.0<br>4.2                      | 2.3        | 2.5     |
| MEDICAL ASSISTANTS  | 4.0          | 3.6        | 4.2                             | 4.1        | 3.4     |
| NURSING AIDES ORDERLIES & ATTENDANTS  | 4.9          | 4.2        | 6.3                             | 2.9        | 3.1     |
| PHARMACY HELPERS  | 3.8          | 2.5        | 1.8                             | 3.3        | 3.0     |
| PSYCHIATRIC AIDES   | 3.0          | 3.2<br>3.8 | 4.1                             | 3.5        | 2.9     |
| SELECTED PERSONAL SERVICE WORKERS   |              |            | _,,                             | J.,        | 3.1     |
| BARBERS   |              |            |                                 |            |         |
| CHILD CARE ATTENDANTS   | 2.1          | 3.9        | 3.9                             | 5.3        | 3.2     |
| CHILD CARE WORKERS  | 4.7          | 4.7        | - 10.6<br>- 10.0                | . 5.7      | 3.8     |
| COSMETOLOGISTS  | 4.8          | 4.9        | - 10.0                          | 5.5        | 4.5     |
| COSMETOLOGISTS WOMEN'S HAIRSTYLISTS   |              |            | 2.3                             | 417        |         |
| MANICURISTS   | 1.5          | 3.2        | 3.3                             | 4.9        | 2.6     |
| SHAMPOOERS & SCALP TREATMENT OPERATORS  | 1.5          | 3.3        | 3.3<br>3.3<br>3.2<br>3.1<br>0.6 | 5.0        | 2.6     |
| SHAMPODERS & SCALP TREATMENT OPERATORS HOUSEKEEPERS HOTEL & MOTEL WELFARE SERVICE AIDES |              |            |                                 |            | 2.4     |
| WELFARE SERVICE AIDES   | 7.1          | 4.3        | 0.6<br>- 3.0                    | 4.0        | 3.8     |
| GARDENERS & GROUNDSKEEPERS EXCEPT FARM  | 2.0          |            | - 0.1                           |            |         |
| LABORERS EXCEPT FARM  |              |            |                                 |            |         |
|   |              |            |                                 |            |         |
| HELPERS TRADES  | - 1.2        | 1.1        | E 4                             | 7 7        | 2 (     |
| STOCK HANDLERS  | 0.4          | 0.9        | 3.4                             | 3.3<br>2.0 |         |
| ORDER FILLERS   | 0.7          | 2.0        | 3.5                             | 2.0        |         |
| STOCK CLERK SALES FLOOR   |              |            | 3. <b>3</b>                     | 1.7<br>2.2 |         |
| TOTAL ALL OCCUPATIONS   | 2.7          | 1.9        |                                 | 3.0        |         |
|   |              | #17        | 3.3                             | 5.0        | 2.0     |

SOURCE: BRA RESEARCH DEPARTMENT; REGIONAL ECONOMIC MODELS, INC.. NOVEMBER 13, 1985.

